



Vacuum Automation

Clamping Technology Catalog

Edition 6

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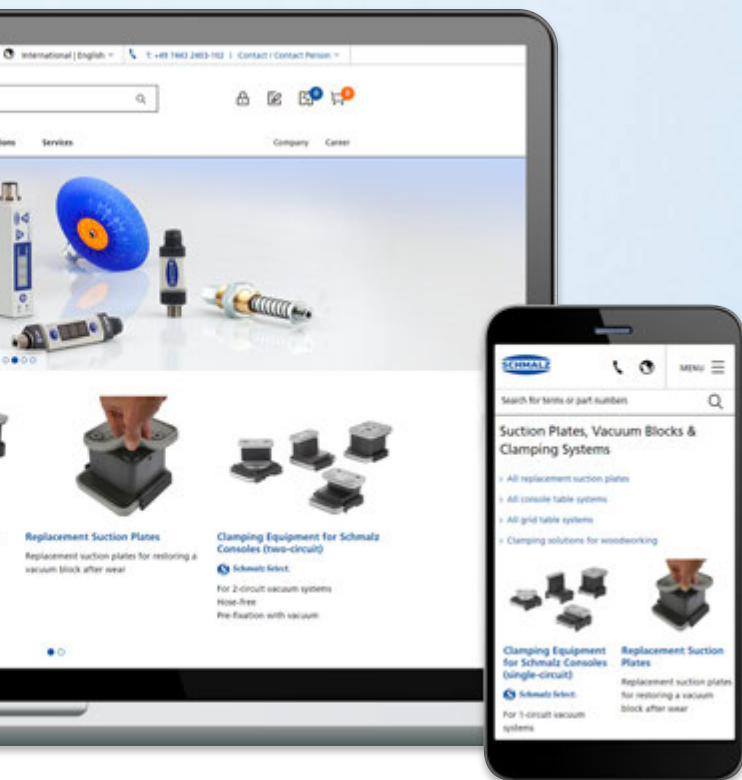
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Schmalz: Vacuum Technology for Intelligent Automation and Ergonomic Handling

1500
employees
working hard for our customers.



19
locations
for outstanding customer service worldwide.

9
percent
of our revenue is invested in innovative ideas and new products.

580
copyrights
are proof of our groundbreaking innovations.

Schmalz is the Market Leader in Vacuum Automation and Ergonomic Handling Systems.

The wide range of products in the Vacuum Automation unit includes individual components such as suction cups and vacuum generators, as well as complete gripping systems and clamping solutions for holding workpieces, for example in CNC machining centers. The Handling Systems unit offers innovative handling solutions with vacuum lifters and crane systems for industrial and handicraft applications.

Our products are used in different applications for example in the logistics industry, the automotive industry, the glass industry and in furniture production.

With comprehensive consulting, a focus on innovation and first-class quality, Schmalz offers its customers long-lasting benefits. Schmalz's intelligent solutions make production and logistics processes more flexible and efficient, while also preparing them for the increasing trend toward digitalization.

Vacuum Automation



Components



Systems



Clamping solutions

Handling Systems



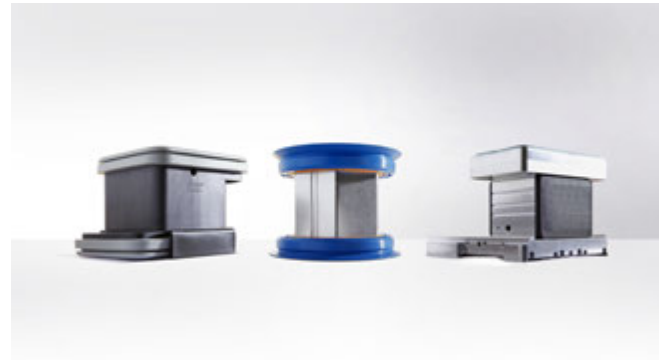
Vacuum lifters and crane systems

Preferred Product Range for Vacuum Technology

S Selected by Experts. Schmalz Select.

With more than 6,000 components, Schmalz offers the most comprehensive portfolio on the market. With our preferred product range **Schmalz Select** we support you in selecting the right solution. Our experts have selected the components that suit about 80 percent of all standard applications.

In addition, you benefit from quick procurement times. Products from the Schmalz Select range can be selected easily and quickly in our online shop. Our delivery promise: These components are in stock at our main warehouse in Germany and are ready to ship.



BENEFITS OF SCHMALZ SELECT



OUR EXPERT TIP

Simple selection.

Schmalz Select fits about 80 percent of all standard applications.



OUR DELIVERY PROMISE

Fast shipping.

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Schmalz Select products are available worldwide – and in the long term.

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Schmalz Select



Schmalz Connect.

Vacuum Technology for the Digital Factory

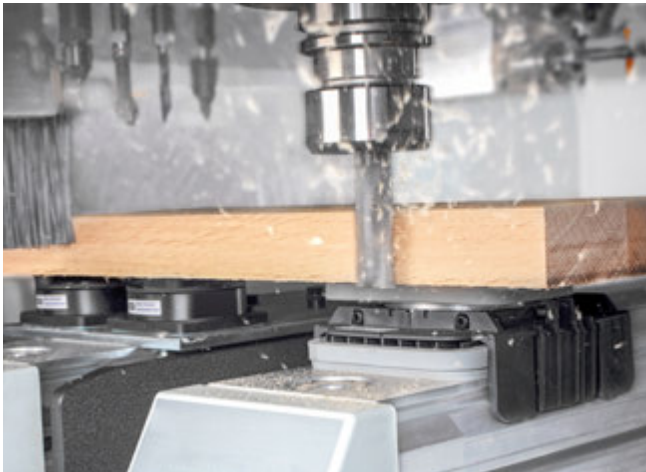
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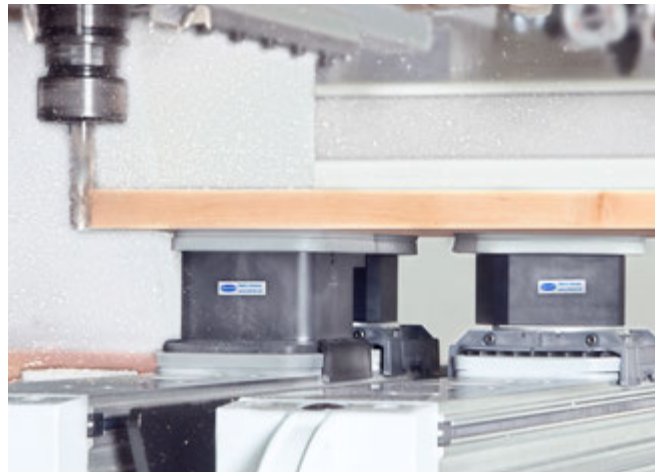


The Industry Standard for CNC Woodworking

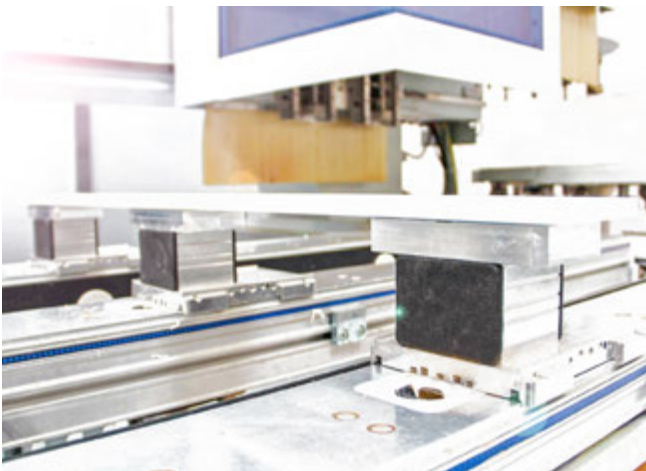
Being a long-time partner of well-known machine manufacturers, Schmalz offers considerable experience and expertise in vacuum clamping technology. From initial outfitting to retrofitting solutions and spare parts, Schmalz offers a wide range of high-quality clamping equipment for all common machine manufacturers and machine types. Whether you're using a single-circuit or two-circuit vacuum system, a grid, nesting or flat table, and whether it's for panel processing or frame production – Schmalz clamping equipment can be positioned precisely and is quick and easy to replace when changing orders.



Vacuum blocks VCBL-K1 in mixed use with Adapter-Plate ISAP-K1 for processing a wooden board



Vacuum blocks VCBL-K2 for processing a wooden board

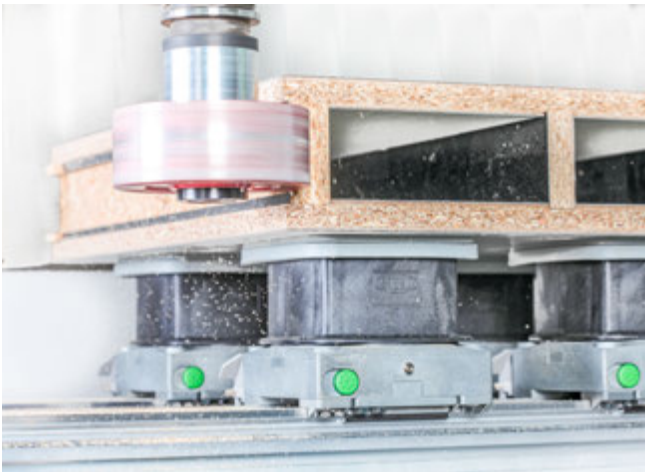


Aluminum vacuum blocks VCBL-A-K2 for processing furniture parts

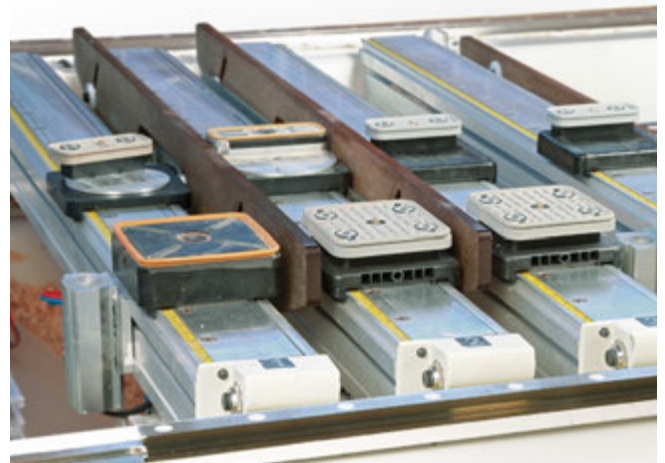


Mechanical clamp VCMC-K1 for processing narrow frame parts

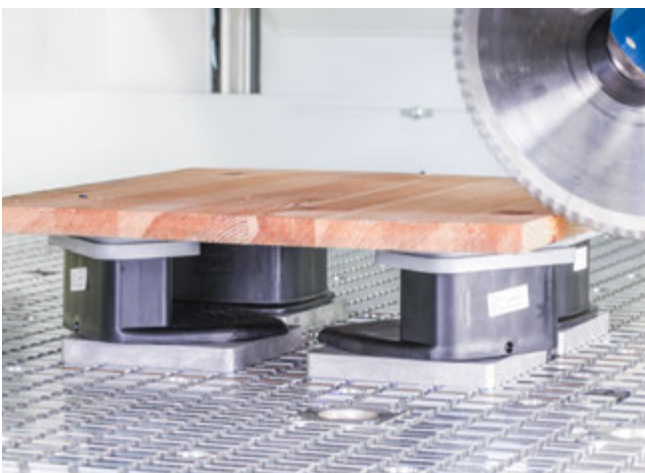




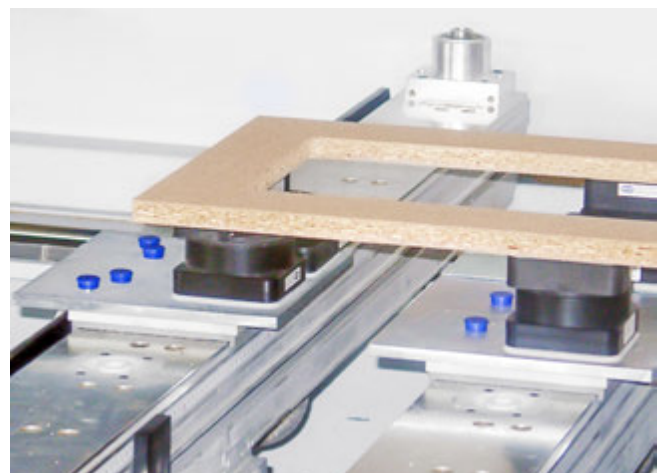
Schmalz vacuum blocks VCBL-B for clamping wooden components, compatible with Biesse* suction block mountings



Schmalz vacuum blocks VCBL-S4 for CNC machining centers from SCM / Morbidelli* used together with the originally fitted vacuum blocks



Adapter-Plates AP-R with vacuum block VCBL-B for clamping wooden parts



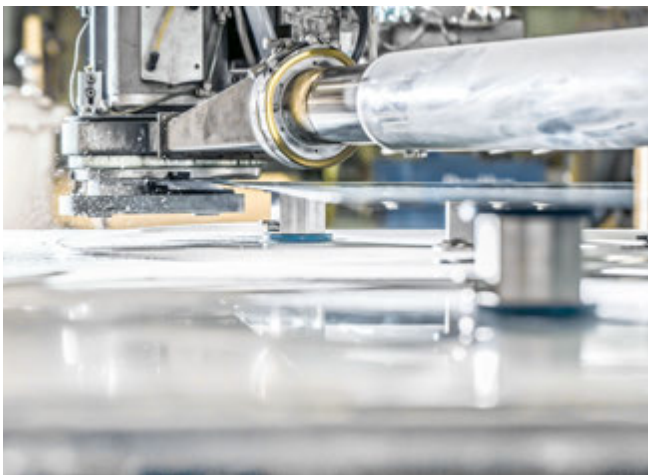
Console table K2 with Adapter-Plates ISAP-K2 and suction cups ISCUP for clamping particle board frames

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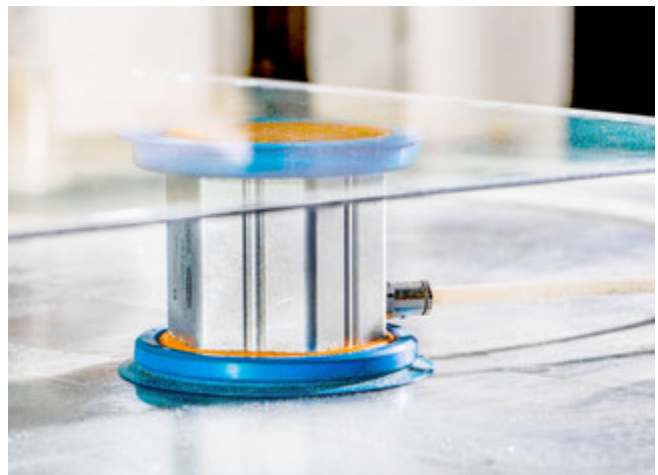


The Highest Level of Safety and Precision

Schmalz clamping solutions ensure flexible and efficient production processes in glass processing. Vacuum blocks with special friction pads are wear resistant and guarantee precise results, even in challenging operating conditions. High lateral force absorption and low height tolerances ensure optimal quality while grinding glass edges.



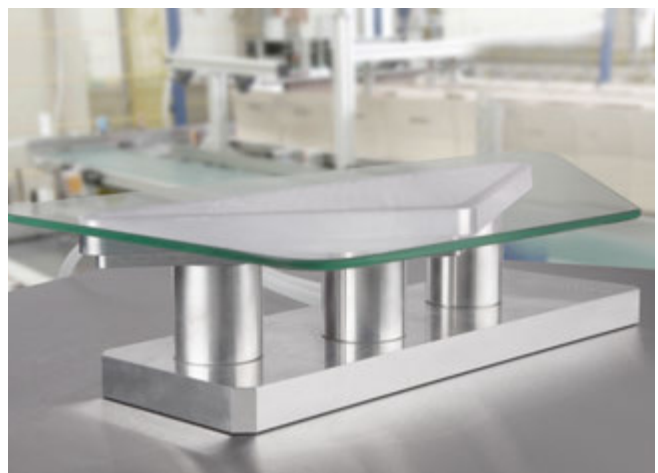
Vacuum blocks VCBL-GL for processing bus windows



Vacuum blocks VCBL-GL for clamping automotive glass

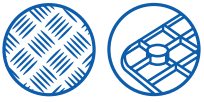


Schmalz Quick-Change SQC for Bystronic* machines clamping glass sheets



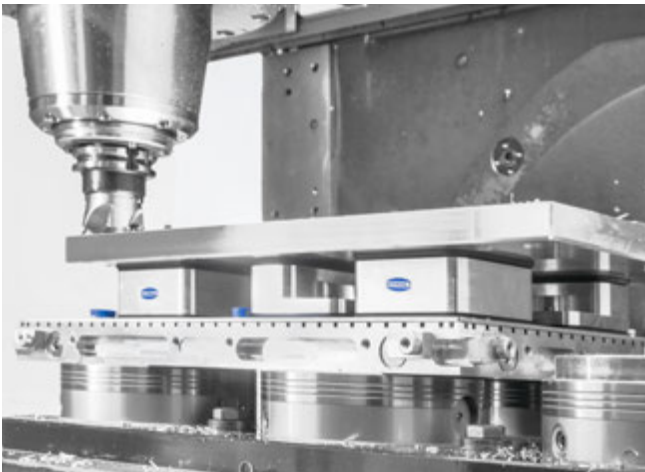
Contoured vacuum block VCBL-GL with square base plate and triangular suction plate for clamping automotive glass

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Economical and Flexible Clamping from Batch Size One

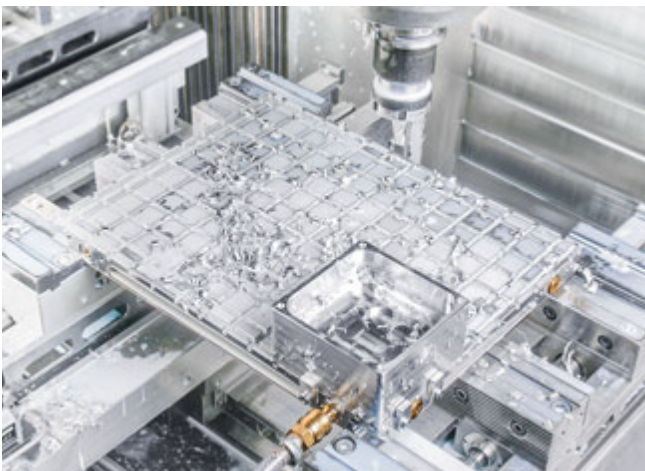
Schmalz clamping solutions provide increased flexibility and reduce setup work for metal and plastics processing. Their low-vibration processing allows for efficient and gentle machining of thin, flat workpieces. Even small quantities can be produced economically and with repeatable quality.



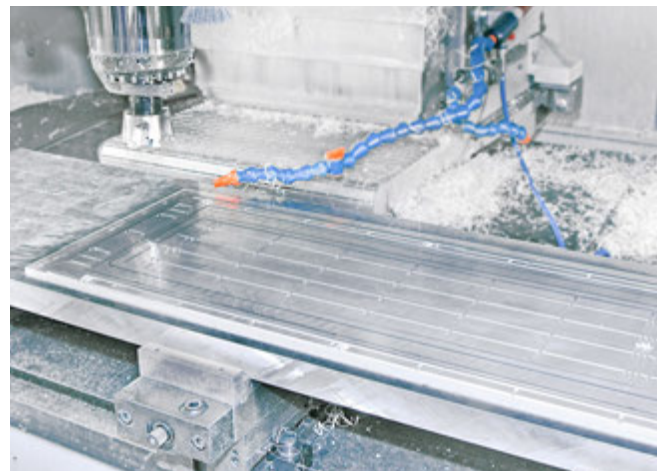
Matrix-Plate MPL with Innospann steel-plate ISST-MPL and vacuum blocks ISBL for cutting recesses in CNC machining



Vacuum clamping system Matrix-Plate MPL for engraving a brass sign



Vacuum clamping system Matrix-Plate MPL for clamping aluminum parts



Vacuum clamping system Matrix-Plate in a customer-specific design for processing a plastic sheet

Clamping Equipment for Console Table Systems



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Design of Console Table Systems Selection of Vacuum Blocks by Suction Area and Height

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Clamping Equipment for 1-Circuit Systems



Vacuum Blocks VCBL-K1

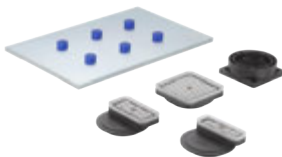
- 1-circuit vacuum systems
- Hose-free
- Pre-fixation with guide strips



Vacuum block VCBL-K1 for use on CNC machining centers with single-circuit console table systems from Schmalz.



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Adapter-Plates ISAP-K1

- 1-circuit vacuum systems
- Mechanical pre-fixation to the console
- Use of Innospann suction cups



Innospann Adapter-Plate ISAP-K1 for use on CNC machining centers with single-circuit console table systems from Schmalz.



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Aluminum Vacuum Blocks VCBL-A-K1

- 1-circuit vacuum systems
- Vacuum block made of aluminum
- Hose-free with mechanical pre-fixation to the console



Vacuum block VCBL-A-K1 made of aluminum for use in milling of solid wood and applications with high cutting forces.



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Mechanical Clamps VCMC-K1

- 1-circuit vacuum systems
- For frame and window profiles
- Pre-fixation to console by means of vacuum



Mechanical clamp VCMC-K1 for use on CNC machining centers with single-circuit console table systems from Schmalz.



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Clamping Equipment for 2-Circuit Systems



Vacuum Blocks VCBL-K2

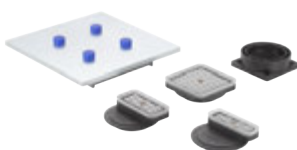
- 2-circuit vacuum systems
- Hose-free
- Pre-fixation to console by means of vacuum



Vacuum block VCBL-K2 for use on CNC machining centers with two-circuit console table systems from Schmalz.



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Adapter-Plates ISAP-K2

- 2-circuit vacuum systems
- Pre-fixation to console by means of vacuum
- Use of Innospann suction cups





















Innospann Adapter-Plate ISAP-K2 for use on CNC machining centers with two-circuit console table systems from Schmalz.



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At a Glance

	<p>Aluminum Vacuum Blocks VCBL-A-K2</p> <ul style="list-style-type: none"> • 2-circuit vacuum systems • Vacuum block made of aluminum • Hose-free pre-fixation to console by means of vacuum 	 <p>Vacuum block VCBL-A-K2 made of aluminum for use in milling of solid wood and applications with high cutting forces.</p>	 37
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<h3>Clamping Equipment for Systems from Biesse*</h3>			
	<p>Vacuum Blocks VCBL-B</p> <ul style="list-style-type: none"> • Vacuum system for Biesse consoles • Hose-free with touch valve • Pre-fixation in the suction block mounting 	 <p>Vacuum block VCBL-B for use on CNC machining centers with console table systems from the machine manufacturer Biesse.</p>	 43
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	<p>Vacuum Blocks VCBL-S</p> <ul style="list-style-type: none"> • Vacuum system for SCM consoles • Integrated touch valve • Mechanical pre-fixation to the console 	 <p>Vacuum block VCBL-S for use on CNC machining centers with console table systems from the machine manufacturers SCM / Morbidelli.</p>	 52
	<p>Adapter-Plates ISAP-S</p> <ul style="list-style-type: none"> • Vacuum system for SCM consoles • Mechanical pre-fixation to the console • Use of Innospann suction cups 	 <p>Innospann Adapter-Plate ISAP-S1 and ISAP-S4 for use on CNC machining centers with console table systems from the machine manufacturers SCM / Morbidelli.</p>	57

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Adapter-Plates AP-S4

- Vacuum system for SCM consoles
- Integrated touch valve
- Mechanical pre-fixation to the console



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Adapter-Plate AP-S4 in connection with VCBL-B for use on console table systems from the Italian machine manufacturers SCM / Morbidelli



Mechanical Clamps VCMC-S

- Vacuum system for SCM consoles
- For frame and window profiles
- Mechanical pre-fixation to the console



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Mechanical clamp VCMC-S for use on CNC machining centers with console table systems from the Italian machine manufacturer SCM / Morbidelli.



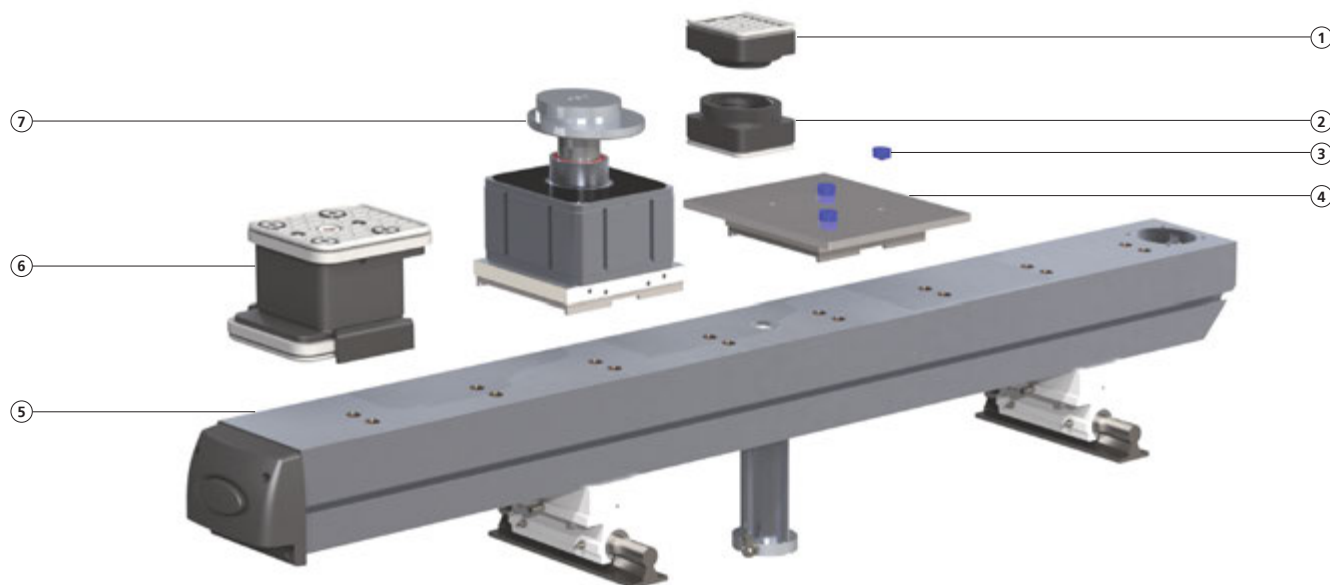
Schmalz Select preferred product range – Article selection in the product family. Further information: WWW.SCHMALZ.COM/SELECT



Selection Aid

At a Glance

Design of Console Table Systems



Innospann system

- ① Suction cup IS-CUP
- ② Mono-Base IS-MB
- ③ Sealing magnet
- ④ Adapter-Plate IS-AP for consoles
- ⑤ Console tables
Single-circuit, two-circuit, SCM / Morbidelli or Biesse systems
- ⑥ Vacuum blocks
e.g. VCBL-K2
- ⑦ Mechanical clamps
e.g. VCMC-K2

Selection of Vacuum Blocks by Suction Area and Height

Suction area L x W [mm]	Height							
	29 [mm]	32.7 [mm]	48 [mm]	50 [mm]	74 [mm]	75 [mm]	100 [mm]	125 [mm]
160x120							VCBL-A-K1	VCBL-A-K1
							VCBL-A-K2	VCBL-A-K2
140x115				VCBL-K1		VCBL-K2	VCBL-K2	VCBL-K1
				VCBL-K2				VCBL-K2
140x130	VCBL-B		VCBL-B	VCBL-S4	VCBL-B			
120x120		VCBL-S1		VCBL-S1				
125x75	VCBL-B	VCBL-S1	VCBL-B	VCBL-K1	VCBL-B	VCBL-K2	VCBL-A-K1	VCBL-K1
				VCBL-A-K1			VCBL-K2	VCBL-A-K1
				VCBL-K2			VCBL-A-K2	VCBL-K2
				VCBL-S1/S4				VCBL-A-K2
130x30	VCBL-B	VCBL-S1	VCBL-B	VCBL-K1	VCBL-B	VCBL-K2		VCBL-K1
				VCBL-K2			VCBL-K2	VCBL-K2
				VCBL-S1/S4				
120x50	VCBL-B	VCBL-S1	VCBL-B	VCBL-K1	VCBL-B	VCBL-K2	VCBL-A-K1	VCBL-K1
				VCBL-A-K1			VCBL-K2	VCBL-A-K1
				VCBL-K2			VCBL-A-K2	VCBL-K2
				VCBL-S1/S4				

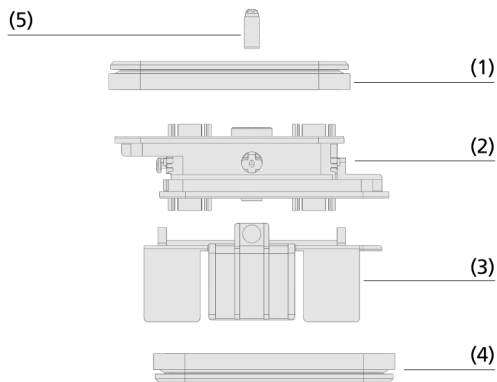
Vacuum Blocks VCBL-K1



Height 50 mm and 125 mm



Vacuum Blocks VCBL-K1



System Design Vacuum Blocks VCBL-K1



Vacuum Block VCBL-K1 for clamping solid wood

Suitability for Industry Specific Applications

Applications

- Hose-free vacuum clamping system for CNC machining centers with console table (1-circuit system)
- The vacuum blocks are pre-fastened to the consoles using guide strips and secured against movement during setup
- The vacuum clamps the vacuum blocks onto the console and the workpiece onto the vacuum blocks
- The optional touch valve (TV) allows unneeded suction cups to be kept on the machine table
- Enables damage-free clamping with the highest precision and holding force

Design

- Upper suction plate (1) for fixing the workpiece
- Sturdy plastic main body (2)
- Guide strip (3) for positioning and mechanical pre-fixing on the console
- Bottom suction plate (4) for fastening the suction cup to the console
- Optional touch valve (5)

Our Highlights...

- Sealing edges and friction surfaces tailored for wooden surfaces
- High dimensional accuracy
- Large selection of different designs
- Replacement suction plates can be exchanged without tools

Your Benefits...

- Extremely high resistance to lateral forces
- Enables highest accuracy in the production process
- Maximum flexibility and set-up time reduction
- Fast, easy and cost effective replacement of suction plates

Vacuum Blocks VCBL-K1

Height 50 mm and 125 mm



Designation Code Vacuum Blocks VCBL-K1

VCBL-K1	-	125x75	-	x50	-	Q	-	TV
1		2		3		4		5

1 – Abbreviated designation

Code	Type
VCBL-K1	Vacuum block, 1-circuit console system

2 – Suction area

Code	LxW in mm
120x50...	120x50 to 140x115
140x115	

3 – Height

Code	Height in mm
x50...	50 and 125
x125	

4 – Product addition

Code	Type
D-360	Rotatable by 360°
L	Mounted lengthwise
Q	Mounted crosswise

5 – Product addition

Code	Type
TV	With touch valve

The vacuum block VCBL-K1 is delivered assembled. The product consists of:

- Upper suction plate type VCSP-O - elastomer part, available in various dimensions and suction areas
- Base body made of plastic
- Bottom suction plate type VCSP-U - Elastomer part

Available spare parts: suction plate (top), wear part set, suction plate (bottom), sealing frame, friction plate, metal strips, guide strip for suction block

Available accessories: Suction plate (top) foam rubber



Ordering Data Vacuum Blocks VCBL-K1

Type				Dimensions (LxW):			
				120x50	125x75	130x30	140x115
VCBL-K1	50	D-360	-	10.01.12.00825	10.01.12.00497	10.01.12.01455	-
VCBL-K1	50	L	-	10.01.12.00769	10.01.12.00230	10.01.12.00378	-
VCBL-K1	50	L	TV	-	10.01.12.00371	-	-
VCBL-K1	50	Q	-	10.01.12.00770	10.01.12.00211	10.01.12.00379	-
VCBL-K1	50	Q	TV	-	10.01.12.00370	-	-
VCBL-K1	50	-	-	-	-	-	10.01.12.00210
VCBL-K1	50	-	TV	-	-	-	10.01.12.00369

Type				Dimensions (LxW):			
				120x50	125x75	130x30	140x115
VCBL-K1	125	D-360	-	10.01.12.02214	10.01.12.02213	10.01.12.02929	-
VCBL-K1	125	L	-	10.01.12.02372	10.01.12.02370	10.01.12.02374	-
VCBL-K1	125	Q	-	10.01.12.02371	10.01.12.02364	10.01.12.02373	-
VCBL-K1	125	-	-	-	-	-	10.01.12.02363













Vacuum Blocks VCBL-K1

Height 50 mm and 125 mm



Ordering Data Spare Parts Vacuum Blocks VCBL-K1

Type			Spare Parts		Part no.
VCBL-K1	120x50	50	Suction plate (top)	VCSP-O 120x50x15.5	10.01.12.00012 
VCBL-K1	125x75	50	Suction plate (top)	VCSP-O 125x75x16.5	10.01.12.00011 
VCBL-K1	130x30	50	Suction plate (top)	VCSP-O 130x30x29.5	10.01.12.00702
VCBL-K1	140x115	50	Suction plate (top)	VCSP-O 140x115x16.5	10.01.12.00488 
VCBL-K1	120x50	125	Suction plate (top)	VCSP-O 120x50x15.5	10.01.12.00012 
VCBL-K1	125x75	125	Suction plate (top)	VCSP-O 125x75x16.5	10.01.12.00011 
VCBL-K1	130x30	125	Set of parts subject to wear	VST VCSP	10.01.12.02348
VCBL-K1	140x115	125	Suction plate (top)	VCSP-O 140x115x16.5	10.01.12.00488 



Type			Spare Parts		Part no.
VCBL-K1	120x50		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K1	10.01.12.00228 
VCBL-K1	125x75		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K1	10.01.12.00228 
VCBL-K1	130x30		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K1	10.01.12.00228 
VCBL-K1	140x115		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K1	10.01.12.00228 

Type	Sealing frame	Friction plate
VCBL-K1	130x30	10.01.12.00804

Type	Part no.
Metal strips for bottom suction plate	VST VC-SYS Insert
Guide strip vacuum block block, 1-circuit H=50 mm	VST VCFL
Guide strip vacuum block block, 1-circuit H=125 mm	VST VCFL VCBL-K1



Ordering Data Accessories Vacuum Blocks VCBL-K1

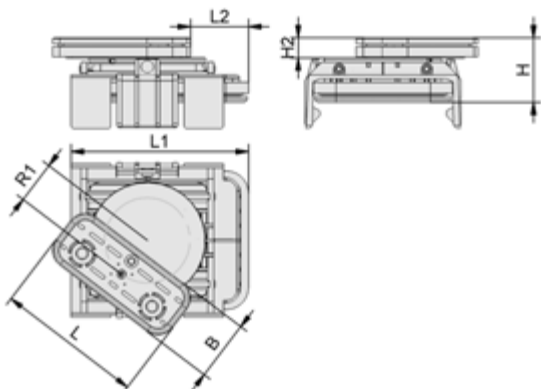
Type	Accessories			Part no.	
VCBL-K1	125x75	Suction plate (top)	Foam rubber suction plate	VCSP-O 125x75x17.7 MOS	10.01.12.03511 
VCBL-K1	140x115	Suction plate (top)	Foam rubber suction plate	VCSP-O 140x115x18.5 MOS	10.01.12.03507 

Vacuum Blocks VCBL-K1

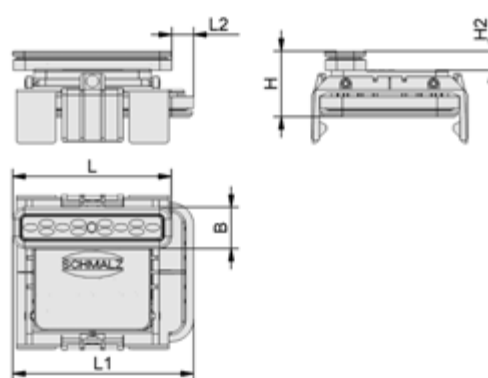
Height 50 mm and 125 mm



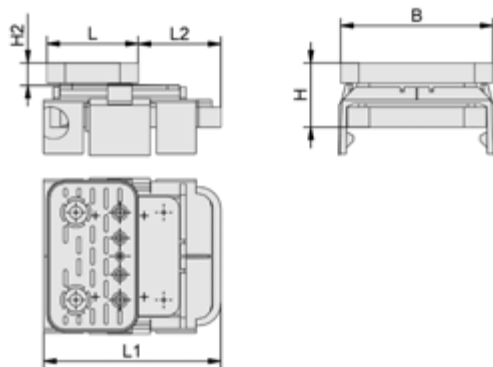
Design Data Vacuum Blocks VCBL-K1



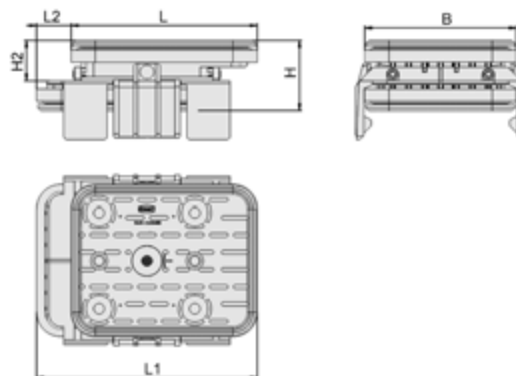
VCBL-K1 D-360



VCBL-K1 L



VCBL-K1 Q



VCBL-K1 140x115

Type	B [mm]	H [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	R1 [mm]
VCBL-K1 120x50x50 D-360	50	50	15	120	140	100	38
VCBL-K1 120x50x50 L	50	50	17	120	140	23	-
VCBL-K1 120x50x50 Q	50	50	17	120	140	93	-
VCBL-K1 125x75x50 D-360	75	50	15	125	140	69	24
VCBL-K1 125x75x50 L	75	50	17	125	140	21	-
VCBL-K1 125x75x50 L TV	75	50	17	125	140	21	-
VCBL-K1 125x75x50 Q	75	50	17	125	140	68	-
VCBL-K1 125x75x50 Q TV	75	50	17	125	140	68	-
VCBL-K1 130x30x50 D-360	30	50	15	130	140	101	35
VCBL-K1 130x30x50 L	30	50	17	130	140	19	-
VCBL-K1 130x30x50 Q	30	50	13	130	140	102	-
VCBL-K1 140x115x50	115	50	29	140	170	27	-
VCBL-K1 140x115x50 TV	115	50	29	140	170	27	-



Vacuum Blocks VCBL-K1

Height 50 mm and 125 mm



Design Data Vacuum Blocks VCBL-K1

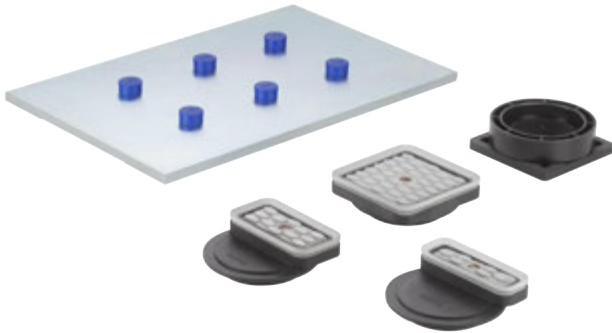
Type	B [mm]	H [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	R1 [mm]
VCBL-K1 120x50x125 D-360	50	125	90	120	146	92	34
VCBL-K1 120x50x125 L	129	125	88	143	74	23	-
VCBL-K1 120x50x125 Q	129	125	88	142	92	92	-
VCBL-K1 125x75x125 D-360	75	125	90	125	146	72	21
VCBL-K1 125x75x125 L	129	125	88	146	53	21	-
VCBL-K1 125x75x125 Q	130	125	88	147	72	71	-
VCBL-K1 130x30x125 D-360	30	125	90	130	140	100	34
VCBL-K1 130x30x125 L	129	125	88	148	82	18	-
VCBL-K1 130x30x125 Q	130	125	88	140	100	100	-
VCBL-K1 140x115x125	115	125	104	140	166	-	-

Adapter-Plates ISAP-K1

Standard dimensions 300 × 200 mm, hole matrix spacing 75 mm



Suitability for Industry Specific Applications

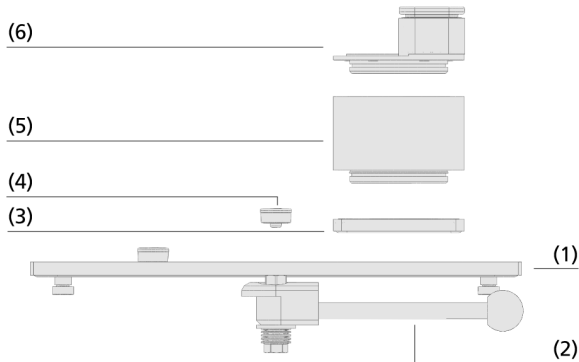


Adapter-Plates ISAP-K1

Applications

- Hose-free vacuum clamping system for CNC machining centers with console table (single-circuit system)
- The Adapter-Plates are positioned directly over the vacuum supply on the consoles
- Flexible loading of adapter plates with up to six additional Mono-Bases ISMB and suction cups ISCUP
- Particularly suitable for narrow and bent workpieces with small suction surfaces and delicate molds
- The modular concept with connectible spacer rings enables various working heights
- Non-damaging and precise clamping with maximum holding force

Design



- Adapter-Plate (1) base plate
- Mechanical clamping mechanism (2) for pre-fixing the Adapter-Plate to the console
- Mono-Base (3) for positioning on top of the vacuum openings of the Adapter-Plate for suction cup (6) for fixing the workpiece are available as accessories
- Spacer ring (5) for adjusting the height to the machining height of the machine
- Sealing magnet (4)

System Design Adapter-Plates ISAP-K1



Adapter-Plates ISAP-K1 with Mono-Base and suction cups for clamping curved wooden parts

Our Highlights...

- Modular system can be enhanced with various suction area sizes
- Suction cups and Mono-Bases can be positioned freely on the Adapter-Plate
- Mixed operation with standard vacuum blocks possible
- Versatile accessories and spare parts can be exchanged without tools

Your Benefits...

- Ideal for clamping narrow or curved workpieces
- Practically every clamping layout can be achieved
- Maximum level of flexibility and shortened set-up times
- Quick, simple and cost-effective replacement of accessories and spare parts

Adapter-Plates ISAP-K1

Standard dimensions 300 × 200 mm, hole matrix spacing 75 mm



Designation Code Adapter-Plates ISAP-K1

ISAP-K1	–	300x200x8
1		2

1 – Abbreviated designation

Code	Type
ISAP-K1	Innospann adapter plate, 1-circuit console system

2 – Dimensions

Code	LxWxH in mm
300x200x8	300x200x8

The adapter plate ISAP-K1 is delivered assembled. The product consists of:

- Base plate made of steel
- Sealing magnets for closing the vacuum openings
- Hand lever for mechanical fixation on the console

Available spare parts: Sealing magnets

Available accessories: Mono-Base, spacer ring, suction cups



Ordering Data Adapter-Plates ISAP-K1

Type	Part no.
ISAP-K1 300x200x8	10.01.14.00025 




Ordering Data Spare Parts Adapter-Plates ISAP-K1







Type	Part no.
Sealing magnet	ISMST 19-7 4ISMST 10.01.14.00847



Ordering Data Accessories Adapter-Plates ISAP-K1

Type	Part no.
Mono-Base	ISMB 80x80x22 10.01.15.00009 
Mono-Base	ISMB 80x80x26 10.01.15.00214

Type	Part no.
Spacer ring, Innospann	ISZR-V 80x65 10.01.15.00602

Type	Part no.
Suction cup	ISCUP Cup 1 80x80x16 10.01.15.00209 
Suction cup	ISCUP Cup 2 80x40x16 10.01.15.00210 
Suction cup	ISCUP Cup 3 80x28x16 10.01.15.00211 
Suction cup	ISCUP Cup 1 80x80x30 10.01.15.00003 
Suction cup	ISCUP Cup 2 80x40x30 10.01.15.00004 
Suction cup	ISCUP Cup 3 80x28x30 10.01.15.00005 

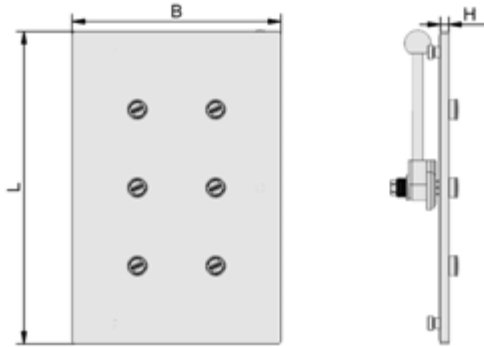


Adapter-Plates ISAP-K1

Standard dimensions 300 × 200 mm, hole matrix spacing 75 mm



Design Data Adapter-Plates ISAP-K1



ISAP-K1

Type	B [mm]	H [mm]	L [mm]
ISAP-K1 300x200x8	200	8	300

Aluminum Vacuum Blocks VCBL-A-K1

Height 50 mm, 100 mm and 125 mm



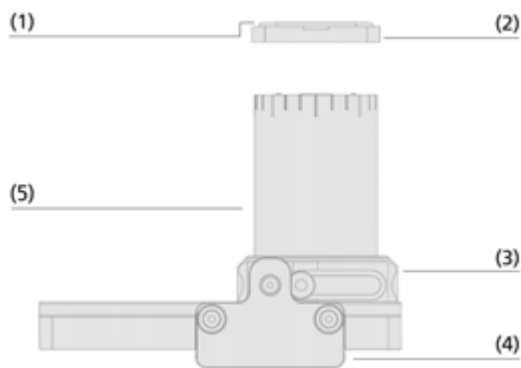
Suitability for Industry Specific Applications



Aluminum Vacuum Blocks VCBL-A-K1

Applications

- Hose free vacuum clamping system for CNC machining centers with console table (1-circuit system)
- Application primarily in processing of solid wood due to blocks optimized for use with high cutting forces
- Specially coordinated friction materials guarantee the best possible adhesion and high precision
- Body made of aluminum creates strong and stiff connection between machine table and workpiece
- Various suction areas and working heights available



System Design Aluminum Vacuum Blocks VCBL-A-K1

Design

- Sealing (1) usable for structured surfaces also
- Sealing frame with friction pad (2) optimized for solid wood applications
- Clamping mechanism (3) for pre-fastening to the console
- Guide strip (4) fits all single-circuit console tables
- Robust main body made of aluminum (5) for maximum stiffness and optimal milling results



Aluminum Vacuum Block VCBL-A-K1 for clamping solid wood

Our Highlights...

- Robust aluminum design
- Special friction pad for rough surfaces
- Additional mechanical clamping
- Various working heights available

Your Benefits...

- Low-vibration connection between workpiece and machine table
- High resistance to axial and lateral forces and thus maximum adherence to cutting parameters
- High-strength pre-fastening to the console
- 5-axis processing possible, depending on the machine

Aluminum Vacuum Blocks VCBL-A-K1

Height 50 mm, 100 mm and 125 mm



Designation Code Aluminum Vacuum Blocks VCBL-A-K1

VCBL-A-K1	-	125x75	-	x50	-	D-360
1		2		3		4

1 – Abbreviated designation

Code	Type
VCBL-A-K1	Vacuum block, aluminum, 1-circuit console system

2 – Suction area

Code	LxW in mm
120x50... 160x120	120x50 to 160x120

3 – Height

Code	Height in mm
x50... x125	50 to 125

4 – Product addition

Code	Type
D-360	Rotatable by 360°
Q	Mounted crosswise

The vacuum block VCBL-A-K1 is delivered assembled. The product consists of:

- Top sealing frame in aluminium with friction pad and seal, available in various sizes and suction surfaces
- Base body made of aluminium with integrated suction plate at the bottom

Available spare parts: Sealing ring, sealing frame



Ordering Data Aluminum Vacuum Blocks VCBL-A-K1

Type			Dimensions (LxW):			
			120x50	125x75	140x115	160x120
VCBL-A-K1	50	D-360	10.01.12.03824	10.01.12.03821	-	-
VCBL-A-K1	50	Q	-	10.01.12.03653	-	-
VCBL-A-K1	50	-	-	-	10.01.12.03648	-
VCBL-A-K1	100	D-360	10.01.12.03884	10.01.12.03883	-	-
VCBL-A-K1	100	Q	-	10.01.12.03882	-	-
VCBL-A-K1	100	-	-	-	-	10.01.12.03881
VCBL-A-K1	125	D-360	10.01.12.03814	10.01.12.03234	-	-
VCBL-A-K1	125	Q	-	10.01.12.03060	-	-
VCBL-A-K1	125	-	-	-	-	10.01.12.03042



Ordering Data Spare Parts Aluminum Vacuum Blocks VCBL-A-K1

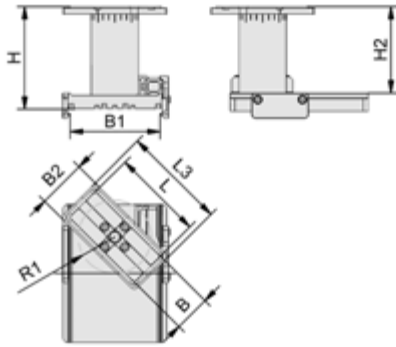
Type		Spare Parts		Part no.
VCBL-A-K1	125x75	Sealing ring (glued)	DR 121/113x6 MOS NK-20	10.01.12.03247
VCBL-A-K1	160x120	Sealing ring (glued)	DR 178.3/170.25x6 MOS NK-20	10.01.12.03248
Type		Spare Parts		Part no.
VCBL-A-K1		Sealing frame (bottom)	VCDR 166x113x6.6 VCSP	10.01.12.03246

Aluminum Vacuum Blocks VCBL-A-K1

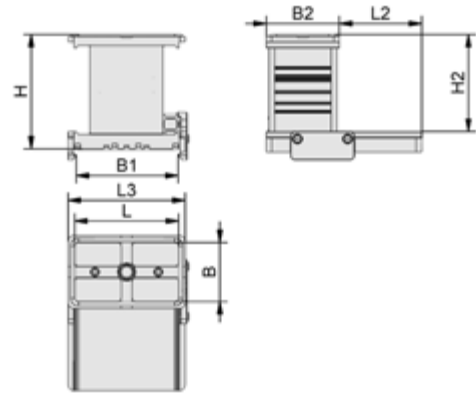
Height 50 mm, 100 mm and 125 mm



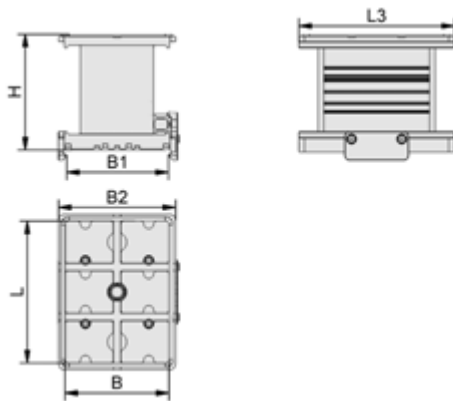
Design Data Aluminum Vacuum Blocks VCBL-A-K1



VCBL-A-K1 D-360



VCBL-A-K1 Q



VCBL-A-K1 140x115 - VCBL-A-K1 160x120

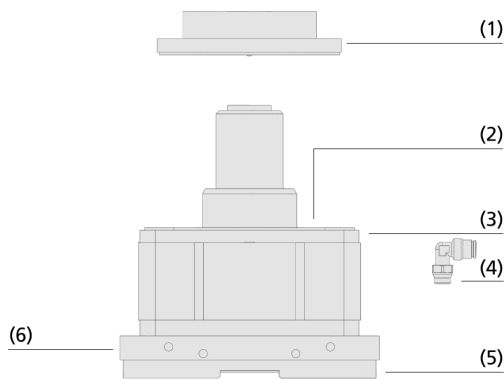
Type	B [mm]	B1 [mm]	B2 [mm]	H [mm]	H2 [mm]	L [mm]	L2 [mm]	L3 [mm]	R1 [mm]
VCBL-A-K1-120x50x50-D-360	50	116	60	50	34	120	-	128	45
VCBL-A-K1-125x75x50-D-360	75	116	80	50	34	125	-	128	45
VCBL-A-K1-125x75x50-Q	75	116	80	50	34	125	90	128	-
VCBL-A-K1-140x115x50	115	116	114	50	-	140	-	140	-
VCBL-A-K1-120x50x100-D-360	50	116	60	100	84	120	-	128	45
VCBL-A-K1-125x75x100-D-360	75	116	80	100	84	125	-	128	45
VCBL-A-K1-125x75x100-Q	75	116	80	100	84	125	90	128	-
VCBL-A-K1-160x120x100	120	116	128	100	-	160	-	170	-
VCBL-A-K1-120x50x125-D-360	50	116	60	125	109	120	-	128	45
VCBL-A-K1-125x75x125-D-360	75	116	80	125	109	125	-	128	45
VCBL-A-K1-125x75x125-Q	75	116	80	125	109	125	90	128	-
VCBL-A-K1-160x120x125	120	116	128	125	-	160	-	170	-

Mechanical Clamps VCMC-K1

Clamping range 10 mm to 100 mm



Mechanical Clamps VCMC-K1



System Design Mechanical Clamps VCMC-K1



Mechanical Clamps VCMC-K1 for clamping frame parts

Suitability for Industry Specific Applications

Applications

- Mechanical clamping system for CNC machining centers with console table (single-circuit system)
- The mechanical clamps are actuated via vacuum and are equipped with an additional vacuum connection for fixing the clamp to the console
- Particularly suitable for narrow and curved workpieces such as frame parts and window profiles
- If the suction area is insufficient, they can be securely clamped mechanically during machining

Design

- Eccentric clamping disc (1) is pulled downward by the vacuum of the single-circuit console via a piston in the clamp
- Friction material (2) for optimizing lateral force absorption
- Main body made of aluminum (3) with interface (5) to the console
- Additional vacuum connection (4) for fixing the suction cup to the console
- Optional fixing flap (6) for repeatable positioning

Our Highlights...

- Eccentrically positioned clamping discs
- Clamping forces of up to 700 N
- Actuated via operating vacuum of the CNC machining center
- Special friction materials on clamping disc and clamping surface

Your Benefits...

- Optimal use of the available clamping surface
- Maximum holding force even with narrow workpieces
- No additional medium required at the machine center
- Extra resistance to lateral forces

Mechanical Clamps VCMC-K1

Clamping range 10 mm to 100 mm



Designation Code Mechanical Clamps VCMC-K1

VCMC-K1	–	154x128x50	–	12-80
1		2		3

1 – Abbreviated designation

Code	Type
VCMC-K1	Mechanical clamp, 1-circuit console system

2 – Dimensions

Code	LxWxH in mm
154x128x50...	154x128x50 to
170x128x100	170x128x100

3 – Clamping range

Code	Clamping range in mm
12-80...	12-80 to 10-100
10-100	

The mechanical clamp VCMC-K1 is delivered assembled. The product consists of:

- Clamping disc
- Main body made of aluminium

Available spare parts: Clamping plate



Ordering Data Mechanical Clamps VCMC-K1

Type		Part no.
VCMC-K1 154x128x50 12-80	with adjustment of the clamping disc by hexagon socket	10.01.12.00781
VCMC-K1 154x128x100 10-100	with adjustment of the clamping disc by hexagon socket	10.01.12.03311
VCMC-K1 170x128x100 10-100	with tool-free quick adjustment of the clamping disc	10.01.12.04104
VCMC-K1 154x128x125 10-100	with adjustment of the clamping disc by hexagon socket	10.01.12.02497



Ordering Data Spare Parts Mechanical Clamps VCMC-K1

Type*		Part no.
Clamping disc	Eccentrically flat	SPAN-TELL 110x14 EX VCMC 10.01.12.01980
Clamping disc	Eccentrically standard	SPAN-TELL 110x25.5 EX VCMC 10.01.12.01930
Clamping disc	Eccentrically high	SPAN-TELL 110x40.5 EX VCMC 10.01.12.01936

*Not for clamps with height 50 mm

Type	Spare Parts	Part no.
VCMC-K1 154x128x50 12-80	Clamping disc	SPAN-TELL 100x27.5 EXZ 12-80 VCMC 10.01.12.01783



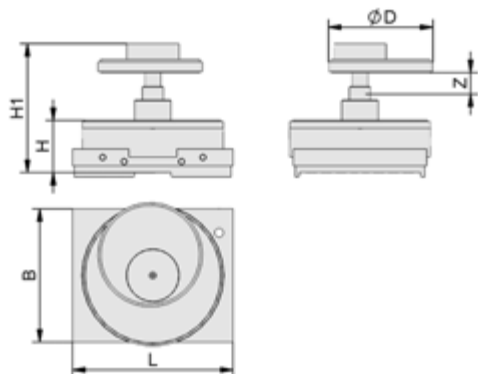
Technical Data Mechanical Clamps VCMC-K1

Type	Weight [kg]	Hose type construction	Clamping range [mm]
VCMC-K1 154x128x50 12-80	0.6	Hose D = 6 d = 4	12 ... 80
VCMC-K1 154x128x100 10-100	4.5	Hose D = 6 d = 4	10 ... 100
VCMC-K1 170x128x100 10-100	4.5	Hose D = 6 d = 4	10 ... 100
VCMC-K1 154x128x125 10-100	4.5	Hose D = 6 d = 4	10 ... 100

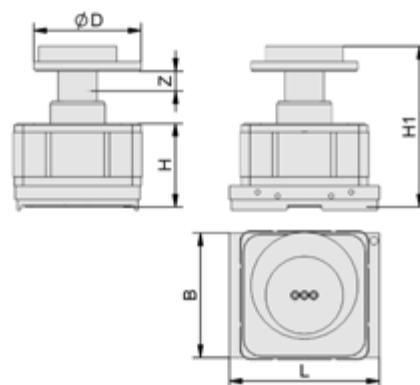
Mechanical Clamps VCMC-K1

Clamping range 10 mm to 100 mm

Design Data Mechanical Clamps VCMC-K1



VCMC-K1 12-80



VCMC-K1 10-100

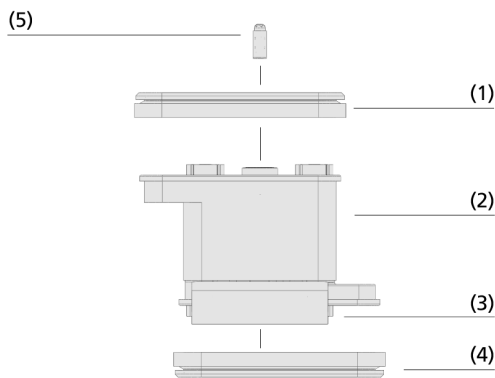
Type	B [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	Z (Stroke) [mm]
VCMC-K1 154x128x50 12-80	128	100	50	88	154	10
VCMC-K1 154x128x100 10-100	128	110	100	184	154	40
VCMC-K1 170x128x100 10-100	132	110	100	148	170	10
VCMC-K1 154x128x125 10-100	128	110	125	204	154	40

Vacuum Blocks VCBL-K2

Height 50 mm, 75 mm, 100 mm and 125 mm



Vacuum Blocks VCBL-K2



System Design Vacuum Blocks VCBL-K2



Vacuum Blocks VCBL-K2 while clamping a workpiece

Suitability for Industry Specific Applications

Applications

- Hose-free vacuum clamping system for CNC machining centers with console table (2-circuit system)
- The vacuum blocks are pre-fixed to the consoles and secured against movement during setup
- Safe and precise clamping of the workpiece and the vacuum blocks on the console with the second vacuum
- The optional touch valve allows unneeded suction cups to be kept on the machine table
- Enables damage-free clamping with the highest precision and holding force

Design

- Upper suction plate (1) for fixing the workpiece
- Sturdy plastic main body (2)
- Guide strip (3) for positioning and mechanical pre-fixing on the console
- Bottom suction plate (4) for fastening the suction cup to the console
- Optional touch valve (5)

Our Highlights...

- Sealing edges and friction surfaces tailored for wooden surfaces
- High dimensional accuracy
- Large selection of different designs
- Replacement suction plates can be exchanged without tools

Your Benefits...

- Extremely high resistance to lateral forces
- Enables highest accuracy in the production process
- Maximum flexibility and set-up time reduction
- Fast, easy and cost effective replacement of suction plates

Vacuum Blocks VCBL-K2

Height 50 mm, 75 mm, 100 mm and 125 mm



Designation Code Vacuum Blocks VCBL-K2

VCBL-K2	-	125x75	-	x50	-	Q	-	TV
1		2		3		4		5

1 – Abbreviated designation

Code	Type
VCBL-K2	Vacuum block, 2-circuit console system

2 – Suction area

Code	LxW in mm
120x50... 140x115	120x50 to 140x115

3 – Height

Code	Height in mm
x50... x125	50 to 125

4 – Product addition

Code	Type
D-360	Rotatable by 360°
L	Mounted lengthwise
Q	Mounted crosswise

5 – Product addition

Code	Type
AS	With lifting system
TV	With touch valve

The vacuum block VCBL-K2 is delivered assembled. The product consists of:

- Upper suction plate type VCSP-O - elastomer part, available in various dimensions and suction surfaces
- Base body made of plastic
- Bottom suction plate type VCSP-U - Elastomer part

Available spare parts: suction plate (top), wearing parts set, suction plate (bottom), sealing frame, friction plate, spare parts set with steel inserts

Available accessories: Suction plate foam rubber



Ordering Data Vacuum Blocks VCBL-K2

Type			Dimensions (LxW):			
			120x50	125x75	130x30	140x115
VCBL-K2	50	D-360	10.01.12.00874	10.01.12.00629	-	-
VCBL-K2	50	L	10.01.12.00771	10.01.12.00628	10.01.12.00647	-
VCBL-K2	50	Q	10.01.12.00772	10.01.12.00644	10.01.12.00646	-
VCBL-K2	50	-	-	-	-	10.01.12.00626

Type				Dimensions (LxW):			
				120x50	125x75	130x30	140x115
VCBL-K2	75	D-360	-	10.01.12.02212	10.01.12.02211	-	-
VCBL-K2	75	L	-	10.01.12.02204	10.01.12.02200	10.01.12.02208	-
VCBL-K2	75	L	TV	10.01.12.02206	10.01.12.02202	10.01.12.02210	-
VCBL-K2	75	Q	-	10.01.12.02203	10.01.12.02199	10.01.12.02207	-
VCBL-K2	75	Q	TV	10.01.12.02205	10.01.12.02201	10.01.12.02209	-
VCBL-K2	75	-	TV	-	-	-	10.01.12.02195
VCBL-K2	75	-	-	-	-	-	10.01.12.02136

Type				Dimensions (LxW):			
				120x50	125x75	130x30	140x115
VCBL-K2	100	D-360	-	10.01.12.01020	10.01.12.01079	-	-
VCBL-K2	100	L	-	10.01.12.00853	10.01.12.00506	10.01.12.00855	-
VCBL-K2	100	Q	-	10.01.12.00126	10.01.12.00447	10.01.12.00854	-
VCBL-K2	100	-	AS	-	-	-	10.01.12.00446
VCBL-K2	100	-	-	-	-	-	10.01.12.00445



Vacuum Blocks VCBL-K2

Height 50 mm, 75 mm, 100 mm and 125 mm



Ordering Data Vacuum Blocks VCBL-K2

Type			Dimensions (LxW):			
			120x50	125x75	130x30	140x115
VCBL-K2	125	D-360	10.01.12.02594	10.01.12.02593	-	-
VCBL-K2	125	L	10.01.12.02125	10.01.12.02124	10.01.12.02126	-
VCBL-K2	125	Q	10.01.12.02119	10.01.12.02118	10.01.12.02120	-
VCBL-K2	125	-	-	-	-	10.01.12.02116



Ordering Data Spare Parts Vacuum Blocks VCBL-K2

Type			Spare Parts		Part no.
VCBL-K2	120 x 50	50	Suction plate (top)	VCSP-O 120x50x15.5	10.01.12.00012
VCBL-K2	125 x 75	50	Suction plate (top)	VCSP-O 125x75x16.5	10.01.12.00011
VCBL-K2	130 x 30	50	Suction plate (top)	VCSP-O 130x30x29.5	10.01.12.00702
VCBL-K2	140 x 115	50	Suction plate (top)	VCSP-O 140x115x16.5	10.01.12.00488
VCBL-K2	120 x 50	75	Suction plate (top)	VCSP-O 120x50x15.5	10.01.12.00012
VCBL-K2	125 x 75	75	Suction plate (top)	VCSP-O 125x75x16.5	10.01.12.00011
VCBL-K2	130 x 30	75	Set of parts subject to wear	VST VCSP	10.01.12.02348
VCBL-K2	140 x 115	75	Suction plate (top)	VCSP-O 140x115x16.5	10.01.12.00488
VCBL-K2	120 x 50	100	Suction plate (top)	VCSP-O 120x50x15.5	10.01.12.00012
VCBL-K2	125 x 75	100	Suction plate (top)	VCSP-O 125x75x16.5	10.01.12.00011
VCBL-K2	130 x 30	100	Set of parts subject to wear	VST VCSP	10.01.12.00723
VCBL-K2	140 x 115	100	Suction plate (top)	VCSP-O 140x115x16.5	10.01.12.00488
VCBL-K2	120 x 50	125	Suction plate (top)	VCSP-O 120x50x15.5	10.01.12.00012
VCBL-K2	125 x 75	125	Suction plate (top)	VCSP-O 125x75x16.5	10.01.12.00011
VCBL-K2	130 x 30	125	Set of parts subject to wear	VST VCSP	10.01.12.02348
VCBL-K2	140 x 115	125	Suction plate (top)	VCSP-O 140x115x16.5	10.01.12.00488

Type			Spare Parts		Part no.
VCBL-K2	120 x 50		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K2	10.01.12.00798
VCBL-K2	125 x 75		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K2	10.01.12.00798
VCBL-K2	130 x 30		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K2	10.01.12.00798
VCBL-K2	140 x 115		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K2	10.01.12.00798

Type	Sealing frame	Friction plate	
VCBL-K2	130x30	10.01.12.00804	10.01.12.00805

Type	Spare Parts			Part no.
VCBL-K2	Set of parts subject to wear	Metal strips for bottom suction plate	VST VC-SYS Inserts	10.01.12.00618



Ordering Data Accessories Vacuum Blocks VCBL-K2

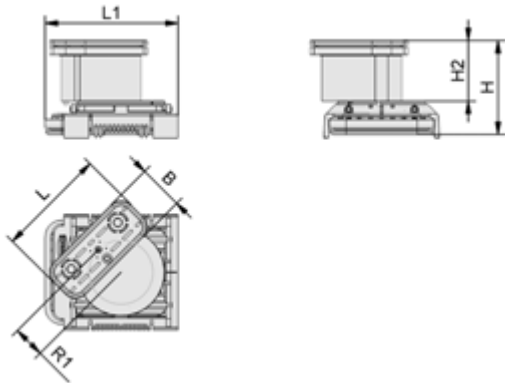
Type	Accessories			Part no.	
VCBL-K2	125x75	Suction plate (top)	Foam rubber suction plate	VCSP-O 125x75x17.7 MOS	10.01.12.03511
VCBL-K2	140x115	Suction plate (top)	Foam rubber suction plate	VCSP-O 140x115x18.5 MOS	10.01.12.03507

Vacuum Blocks VCBL-K2

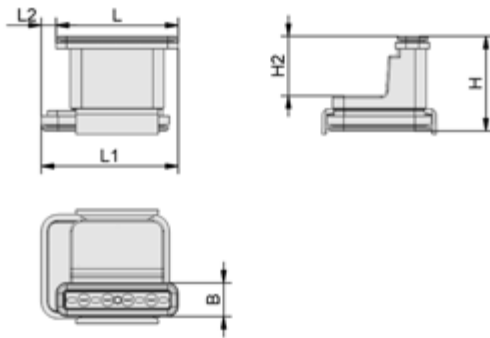
Height 50 mm, 75 mm, 100 mm and 125 mm



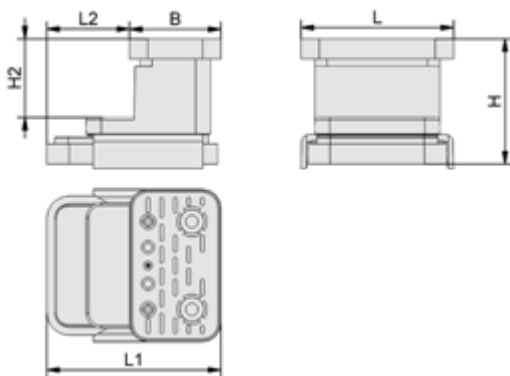
Design Data Vacuum Blocks VCBL-K2



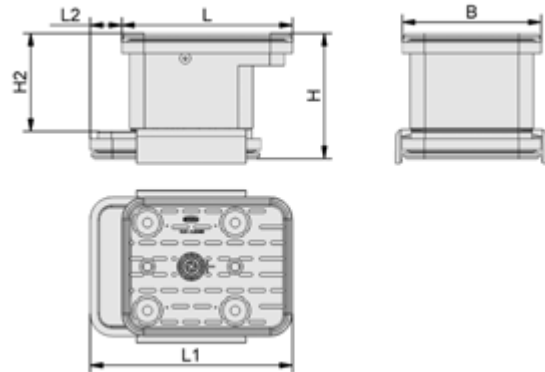
VCBL-K2 D-360



VCBL-K2 L



VCBL-K2 Q



VCBL-K2 140x115

Vacuum Blocks VCBL-K2

Height 50 mm, 75 mm, 100 mm and 125 mm



Design Data Vacuum Blocks VCBL-K2

Type	B [mm]	H [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	R1 [mm]
VCBL-K2 120x50x50 D-360	50	50	16	120	145	-	12
VCBL-K2 120x50x50 L	50	50	17	120	145	23	-
VCBL-K2 120x50x50 Q	50	50	17	120	145	94	-
VCBL-K2 125x75x50 D-360	75	50	16	125	145	-	24
VCBL-K2 125x75x50 L	75	50	17	125	145	21	-
VCBL-K2 125x75x50 Q	75	50	17	125	145	68	-
VCBL-K2 130x30x50 L	30	50	17	130	145	103	-
VCBL-K2 130x30x50 Q	30	50	17	130	145	18	-
VCBL-K2 140x115x50	115	50	17	140	170	26	-
VCBL-K2 120x50x75 D-360	50	75	41	120	145	-	35
VCBL-K2 120x50x75 L	50	75	38	120	143	24	-
VCBL-K2 120x50x75 L TV	50	75	38	120	143	24	-
VCBL-K2 120x50x75 Q	50	75	38	120	142	91	-
VCBL-K2 120x50x75 Q TV	50	75	38	120	142	91	-
VCBL-K2 125x75x75 D-360	75	75	41	125	145	-	24
VCBL-K2 125x75x75 L	75	75	38	125	155	21	-
VCBL-K2 125x75x75 L TV	75	75	38	125	155	21	-
VCBL-K2 125x75x75 Q	75	75	38	125	146	71	-
VCBL-K2 125x75x75 Q TV	75	75	38	125	146	71	-
VCBL-K2 130x30x75 L	30	75	38	130	148	18	-
VCBL-K2 130x30x75 L TV	30	75	38	130	148	18	-
VCBL-K2 130x30x75 Q	30	75	38	130	140	100	-
VCBL-K2 130x30x75 Q TV	30	75	38	130	140	100	-
VCBL-K2 140x115x75	115	75	54	140	166	26	-
VCBL-K2 140x115x75 TV	115	75	54	140	166	26	-
VCBL-K2 120x50x100 D-360	50	100	65	120	145	-	35
VCBL-K2 120x50x100 L	50	100	63	120	145	23	-
VCBL-K2 120x50x100 Q	50	100	63	120	145	68	-
VCBL-K2 125x75x100 D-360	75	100	65	125	145	-	24
VCBL-K2 125x75x100 L	75	100	63	125	145	21	-
VCBL-K2 125x75x100 Q	75	100	63	125	145	68	-
VCBL-K2 130x30x100 L	30	100	63	130	149	16	-
VCBL-K2 130x30x100 Q	30	100	63	130	140	101	-
VCBL-K2 140x115x100	115	100	75	140	166	26	-
VCBL-K2 140x115x100 AS	115	100	75	140	166	26	-
VCBL-K2 120x50x125 D-360	50	125	90	120	145	-	35
VCBL-K2 120x50x125 L	50	125	88	120	143	23	-
VCBL-K2 120x50x125 Q	50	125	88	120	142	92	-
VCBL-K2 125x75x125 D-360	75	125	90	125	145	-	24
VCBL-K2 125x75x125 L	75	125	88	125	146	21	-
VCBL-K2 125x75x125 Q	75	125	88	125	146	72	-
VCBL-K2 130x30x125 L	30	125	88	130	148	18	-
VCBL-K2 130x30x125 Q	30	125	88	130	140	100	-
VCBL-K2 140x115x125	115	125	105	140	166	26	-

Adapter-Plates ISAP-K2

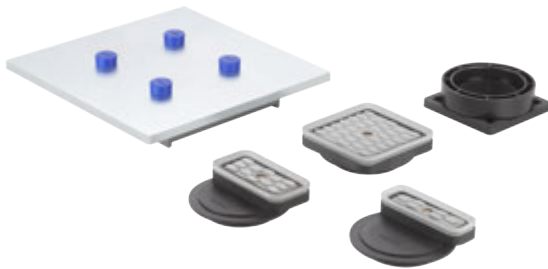
Standard dimensions 200 × 200 mm, hole matrix spacing 75 mm



Suitability for Industry Specific Applications

Applications

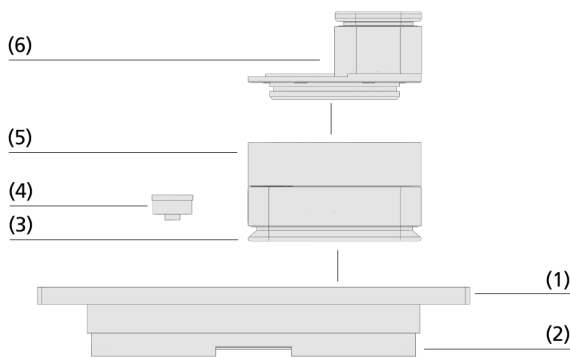
- Hose-free vacuum clamping system for CNC machining centers with console table (two-circuit system)
- The Adapter-Plates are positioned directly over the vacuum supply on the consoles
- The Adapter-Plates can be flexibly equipped with up to four additional Mono-Bases and suction cups
- Particularly suitable for narrow and curved workpieces with small suction surfaces and delicate molds
- The modular concept with connectible spacer rings enables various working heights
- Non-damaging and precise clamping with maximum holding force



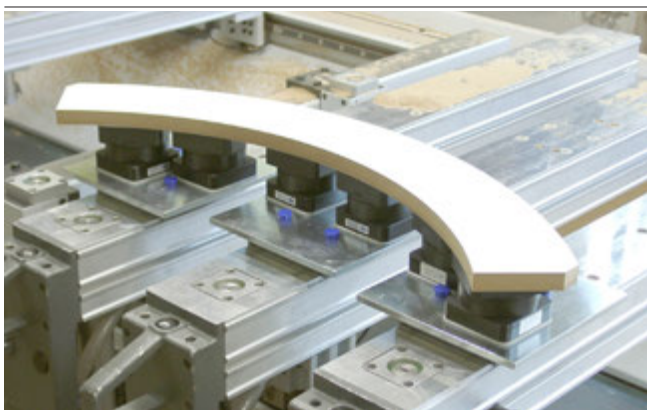
Adapter-Plates ISAP-K2

Design

- Adapter-Plate (1) base plate
- Interface to the machine table (2)
- Mono-Base (3) for positioning on top of the vacuum openings of the Adapter-Plate for suction cup (6) for fixing the workpiece are available as accessories
- Spacer ring (5) for adjusting the height to the machining height of the machine
- Sealing magnet (4)



System Design Adapter-Plates ISAP-K2



Adapter-Plate ISAP-K2 with Mono-Bases and suction cups for clamping wooden components

Our Highlights...

- Modular system can be enhanced with various suction area sizes
- Suction cups and Mono-Bases can be freely positioned on the Adapter-Plate
- Suitable for mixed use with standard vacuum blocks
- Versatile accessories and spare parts can be exchanged without tools

Your Benefits...

- Ideal for clamping narrow or curved workpieces
- Practically every clamping layout can be achieved
- Maximum level of flexibility and shortened set-up times
- Quick, simple and cost-effective replacement of accessories and spare parts

Adapter-Plates ISAP-K2

Standard dimensions 200 × 200 mm, hole matrix spacing 75 mm



Designation Code Adapter-Plates ISAP-K2

ISAP-K2	–	200x200x26
1		2

1 – Abbreviated designation

Code	Type
ISAP-K2	Innospann adapter plate, 2-circuit console system

2 – Dimensions

Code	LxWxH in mm
200x200x26...	200x200x26 and
200x200x28	200x200x28

The adapter plate ISAP-K2 is delivered assembled. The product consists of:

- Base plate made of steel
- Sealing magnets for closing the vacuum openings

Available spare parts: Sealing magnets

Available accessories: Mono-Base, spacer ring, suction cup



Ordering Data Adapter-Plates ISAP-K2

Type	Part no.
ISAP-K2 200x200x26	10.01.14.00117
ISAP-K2 200x200x28	10.01.14.00029



Ordering Data Spare Parts Adapter-Plates ISAP-K2

Type	Part no.
Sealing magnet	ISMST 19-7 4ISMST 10.01.14.00847



Ordering Data Accessories Adapter-Plates ISAP-K2

Type	Part no.
Mono-Base	ISMb 80x80x8 10.01.15.00188
Mono-Base	ISMb 80x80x22 10.01.15.00009
Mono-Base	ISMb 80x80x42 10.01.15.00078

Type	Part no.
Spacer ring, Innospann	ISZR-V 80x25 10.01.15.00295
Spacer ring, Innospann	ISZR-V 80x45 10.01.15.00054
Spacer ring, Innospann	ISZR-V 80x75 10.01.15.00489

Type	Part no.
Cup	ISCUP Cup 1 80x80x30 10.01.15.00003
Cup	ISCUP Cup 2 80x40x30 10.01.15.00004
Cup	ISCUP Cup 3 80x28x30 10.01.15.00005
Cup	ISCUP Cup 1 80x80x16 10.01.15.00209
Cup	ISCUP Cup 2 80x40x16 10.01.15.00210
Cup	ISCUP Cup 3 80x28x16 10.01.15.00211

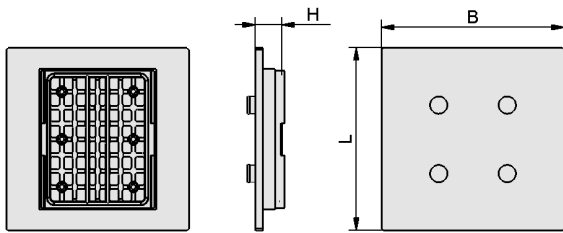


Adapter-Plates ISAP-K2

Standard dimensions 200 × 200 mm, hole matrix spacing 75 mm



Design Data Adapter-Plates ISAP-K2



ISAP-K2

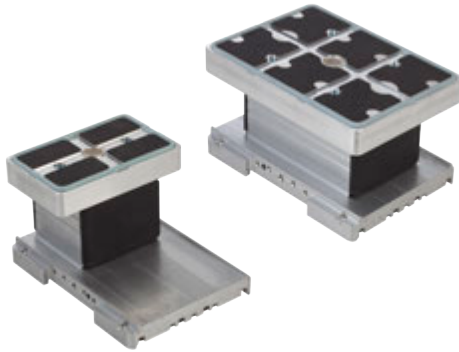
Type	B [mm]	H [mm]	L [mm]
ISAP-K2 200x200x26	200	26	200
ISAP-K2 200x200x28	200	28	200

Aluminum Vacuum Blocks VCBL-A-K2

Height 100 mm and 125 mm



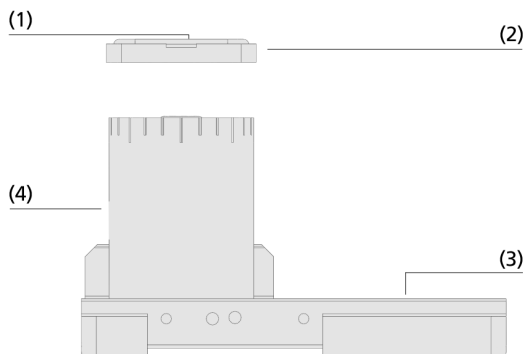
Suitability for Industry Specific Applications



Aluminum Vacuum Blocks VCBL-A-K2

Applications

- Hose-free vacuum clamping system for CNC machining centers with console table (2-circuit system)
- Application primarily in processing of solid wood due to blocks optimized for use with high cutting forces
- Specially coordinated friction materials guarantee the best possible adhesion and high precision
- Body made of aluminum creates a strong and stiff connection between machine table and workpiece
- Vacuum blocks are fixed to the console using one vacuum circuit, while the second circuit clamps the workpiece to the vacuum block
- Various suction areas and working heights available



System Design Aluminum Vacuum Blocks VCBL-A-K2

Design

- Sealing (1) usable for structured surfaces also
- Sealing frame with friction pad (2) optimized for solid wood applications
- Guide strip (3) fits all two-circuit console tables
- Robust main body made of aluminum (4) for maximum stiffness and optimal milling results



Aluminum Vacuum Block VCBL-A-K2 for clamping solid wood

Our Highlights...

- Robust aluminum design
- Special friction pad for rough surfaces
- Various working heights available

Your Benefits...

- Low-vibration connection between workpiece and machine table
- Highest resistance to axial and lateral forces and thus maximum adherence to cutting parameters
- 5-axis processing possible, depending on the machine

Aluminum Vacuum Blocks VCBL-A-K2

Height 100 mm and 125 mm



Designation Code Aluminum Vacuum Blocks VCBL-A-K2

VCBL-A-K2	-	125x75	-	x100	-	D-360
1		2		3		4

1 – Abbreviated designation

Code	Type
VCBL-A-K1	Vacuum block, aluminum, 2-circuit console system

2 – Suction area

Code	LxW in mm
120x50...	120x50 to 160x120
160x120	

3 – Height

Code	Height in mm
x100...x125	100 to 125

4 – Product addition

Code	Type
D-360	Rotatable by 360°
Q	Mounted crosswise

The vacuum block VCBL-A-K2 is delivered assembled. The product consists of:

- Upper suction plate in aluminium with friction pad and seal, available in various sizes and suction surfaces
- Base body made of aluminium with integrated suction plate at the bottom

Available spare parts: Sealing ring, sealing frame



Ordering Data Aluminum Vacuum Blocks VCBL-A-K2

Type	Dimensions (LxW):		
	120x50	125x75	160x120
VCBL-A-K2 100 D-360	10.01.12.03813	10.01.12.03612	-
VCBL-A-K2 100 Q	-	10.01.12.03201	-
VCBL-A-K2 100 -	-	-	10.01.12.03204
VCBL-A-K2 125 Q	-	10.01.12.03902	-
VCBL-A-K2 125 -	-	-	10.01.12.03903



Ordering Data Spare Parts Aluminum Vacuum Blocks VCBL-A-K2

Type	Spare Parts	Part no.
VCBL-A-K2 125x75	Sealing ring (glued)	DR 121/113x6 MOS NK-20
VCBL-A-K2 160x120	Sealing ring (glued)	DR 178.3/170.25x6 MOS NK-20

Type	Spare Parts	Part no.
VCBL-A-K2	Sealing frame (bottom)	VCDR 166x113x6.6 VCSP

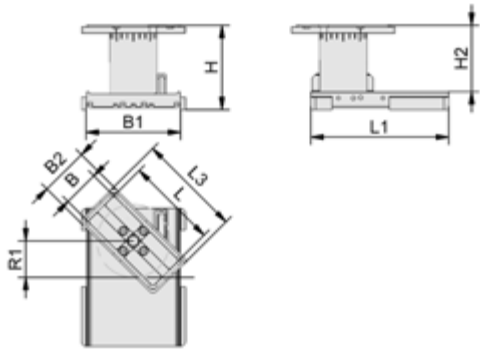


Aluminum Vacuum Blocks VCBL-A-K2

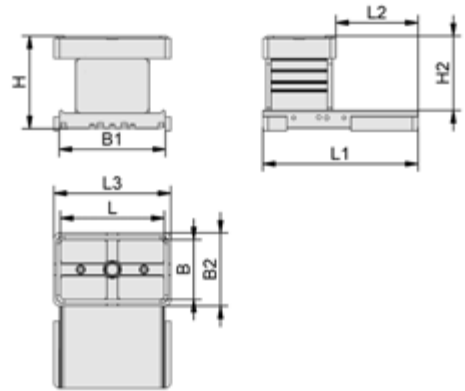
Height 100 mm and 125 mm



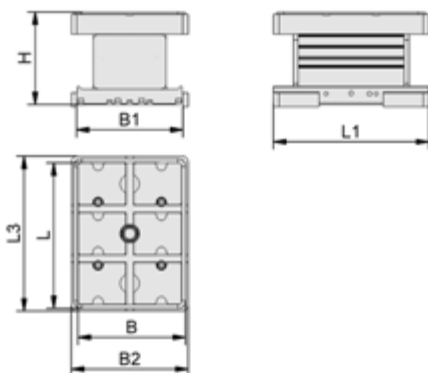
Design Data Aluminum Vacuum Blocks VCBL-A-K2



VCBL-A-K2 D-360



VCBL-A-K2 Q



VCBL-A-K2 160x120

Type	B [mm]	B1 [mm]	B2 [mm]	H [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	R1 [mm]
VCBL-A-K2-120x50x100-D-360	50	115	60	100	84	120	170	-	128	45
VCBL-A-K2-125x75x100-D-360	75	115	80	100	84	125	170	-	128	45
VCBL-A-K2-125x75x100-Q	75	115	80	100	84	125	170	90	128	-
VCBL-A-K2-160x120x100	120	115	128	100	-	160	170	-	170	-
VCBL-A-K2-125x75x125-Q	75	115	80	125	109	125	170	90	128	-
VCBL-A-K2-160x120x125	120	115	128	125	-	160	170	-	170	-

Clamping Equipment for 2-Circuit Systems

Mechanical Clamps VCMC-K2



Clamping range 10 mm to 100 mm



Suitability for Industry Specific Applications



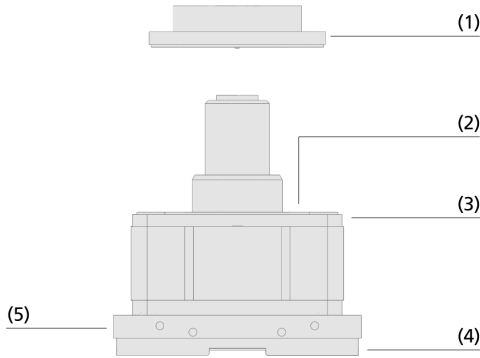
Mechanical Clamps VCMC-K2

Applications

- Mechanical clamping system for CNC machining centers with console table (two-circuit system)
- The mechanical clamps are actuated via vacuum so that no further medium is required at the machine for clamping
- The clamp is pre-fastened to the console using one vacuum circuit, while the second circuit pulls the piston and clamping disc downward
- Particularly well suited for narrow and curved workpieces such as frame parts and window profiles
- If the suction area is insufficient, they can be securely clamped mechanically during machining

Design

- Eccentric clamping disc (1) is pulled downward by the vacuum of the two-circuit console via a piston in the clamp
- Friction material (2) for optimizing lateral force absorption
- Main body made of aluminum (3) with interface (4) to the console
- Optional fixing flap (5) for repeatable positioning



System Design Mechanical Clamps VCMC-K2



Mechanical Clamps VCMC-K2 for clamping frame parts

Our Highlights...

- Eccentrically positioned clamping discs
- Clamping forces of up to 700 N
- Actuated via the operating vacuum of the CNC machining center
- Special friction materials on clamping disc and clamping surface

Your Benefits...

- Optimal use of the available clamping surface
- Maximum holding force even with narrow workpieces
- No additional medium required at the machine
- Extra resistance to lateral forces

Mechanical Clamps VCMC-K2

Clamping range 10 mm to 100 mm



Designation Code Mechanical Clamps VCMC-K2

VCMC-K2	–	154x128x100	–	10-100	–	FI
1		2		3		4

1 – Abbreviated designation

Code	Type
VCMC-K2	Mechanical clamp, 2-circuit console system

2 – Dimensions

Code	LxWxH in mm
154x128x50...	154x128x50 to
170x128x100	170x128x100

3 – Clamping range

Code	Clamping range in mm
12-80...	12-80 to 10-100
10-100	

4 – Product addition

Code	Type
FI	Fixing flap

The Mechanical Clamp VCMC-K2 is delivered assembled. The product consists of:

- Clamping disc
- Base body made of aluminium

Available spare parts: Clamping disc

Available accessories: Wear parts kit



Ordering Data Mechanical Clamps VCMC-K2

Type	Type	Part no.
VCMC-K2 154x128x50 12-80	with adjustment of the clamping disc by hexagon socket	10.01.12.00737
VCMC-K2 154x128x75 12-80	with adjustment of the clamping disc by hexagon socket	10.01.12.02218
VCMC-K2 154x128x100 10-100	with adjustment of the clamping disc by hexagon socket	10.01.12.01885
VCMC-K2 154x128x100 10-100 FI	with adjustment of the clamping disc by hexagon socket	10.01.12.01962
VCMC-K2 170x128x100 10-100	with tool-free quick adjustment of the clamping disc	10.01.12.04105
VCMC-K2 154x128x125 10-100	with adjustment of the clamping disc by hexagon socket	10.01.12.02217



Ordering Data Spare Parts Mechanical Clamps VCMC-K2

Type*	Type	Part no.
Clamping disc	Eccentrically flat	SPAN-TELL 110x14 EX VCMC
Clamping disc	Eccentrically standard	SPAN-TELL 110x25.5 EX VCMC
Clamping disc	Eccentrically high	SPAN-TELL 110x40.5 EX VCMC

*Not for clamps with height 50 mm

Type	Spare Parts	Part no.
VCMC-K2 154x128x50 12-80	Clamping disc	SPAN-TELL 100x27.5 EXZ 12-80 VCMC
VCMC-K2 154x128x75 12-80	Clamping disc	SPAN-TELL 100x27.5 EXZ 12-80 VCMC



Ordering Data Accessories Mechanical Clamps VCMC-K2

Type	Accessories	Part no.
VCMC-K2	Set of parts subject to wear	VST VCMC fixation

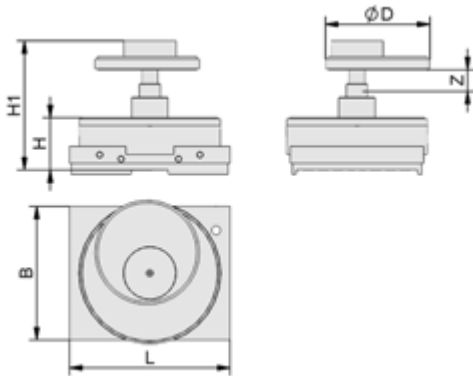
Mechanical Clamps VCMC-K2

Clamping range 10 mm to 100 mm

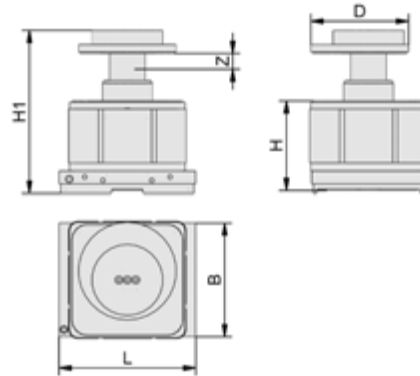
Technical Data Mechanical Clamps VCMC-K2

Type	Weight [kg]	Clamping range [mm]
VCMC-K2 154x128x50 12-80	0.7	12 ... 80
VCMC-K2 154x128x75 12-80	2.5	12 ... 80
VCMC-K2 154x128x100 10-100	3.3	10 ... 100
VCMC-K2 154x128x100 10-100 FI	4.1	10 ... 100
VCMC-K2 170x128x100 10-100	4.5	10 ... 100
VCMC-K2 154x128x125 10-100	4.5	10 ... 100

Design Data Mechanical Clamps VCMC-K2



VCMC-K2 12-80



VCMC-K2 10-100

Type	B [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	Z (Stroke) [mm]
VCMC-K2 154x128x50 12-80	128	135	50	115	154	10
VCMC-K2 154x128x75 12-80	128	135	75	140	154	10
VCMC-K2 154x128x100 10-100	128	110	100	179	154	40
VCMC-K2 154x128x100 10-100 FI	128	110	100	179	154	40
VCMC-K2 170x128x100 10-100	128	110	100	149	170	10
VCMC-K2 154x128x125 10-100	128	110	125	204	154	40

Vacuum Blocks VCBL-B



Height 29 mm, 48 mm and 74 mm



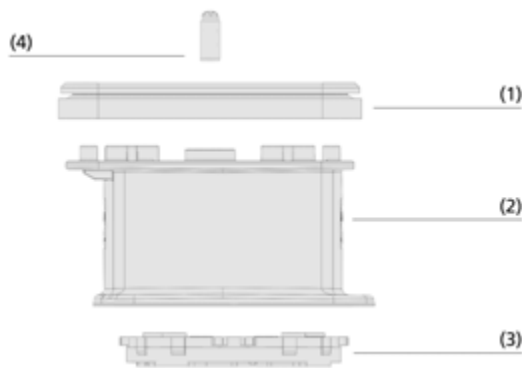
Suitability for Industry Specific Applications



Vacuum Blocks VCBL-B

Applications

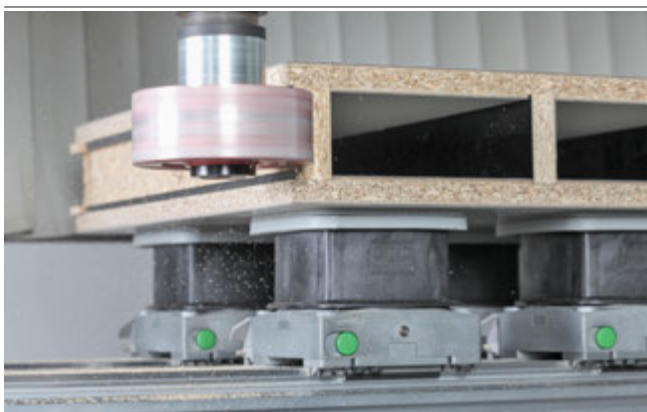
- Hose-free vacuum clamping system for console tables from Biesse with matching suction cup mount
- Fully compatible with the OEM vacuum blocks, allowing mixed operation
- The vacuum blocks can be inserted in any direction in 15° increments of the standard mountings to align the suction area as desired
- Clamping straps on the vacuum block ring and magnets ensure secure fixation in the mounting
- The integrated touch valve allows vacuum blocks that are not currently in use to remain on the machine table



System Design Vacuum Blocks VCBL-B

Design

- Upper suction plate (1) for fixing the workpiece
- Robust plastic body (2)
- Plastic adapter ring for the standard vacuum block mount from Biesse (3)
- Touch valve (4) made of soft plastic
- Heights of 29 mm and 48 mm (for three and four-axis machines) and additionally 74 mm (for five-axis machines)



Vacuum Blocks VCBL-B for clamping particle boards

Our Highlights...

- Sealing edges and friction surfaces tailored for wooden surfaces
- High dimensional accuracy
- Quick and easy to position (can be rotated in 15° increments in the suction cup mounting grid)
- Replacement suction plates can be exchanged without tools

Your Benefits...

- Extremely high resistance to lateral forces
- Enables the highest accuracy in the production process
- Enables highest precision during machining process
- Quick repair of damaged suction plates and reduced spare parts costs

*Biesse is a registered and protected trademark. The articles listed here are products of J. Schmalz GmbH that have been designed to fit CNC machining centers from Biesse.

Vacuum Blocks VCBL-B

Height 29 mm, 48 mm and 74 mm



Designation Code Vacuum Blocks VCBL-B

VCBL-B	-	140x130	-	x74	-	TV
1		2		3		4

1 – Abbreviated designation

Code	Type
VCBL-B	Vacuum block, Biesse system

2 – Suction area

Code	LxW in mm
120x50...	120x50 to 140x130
140x130	

3 – Height

Code	Height in mm
x29...x74	29 to 74

4 – Product addition

Code	Type
TV	With touch valve

The vacuum block VCBL-B is delivered assembled. The product consists of:

- Top suction plate type VCSP-O - elastomer part, available in various dimensions and suction surfaces
- Main body made of plastic
- Plastic adapter ring

Available spare parts: Suction plate (top) VCSP-O, Wearing parts kit, Touch valve TV, Adapter ring

Available accessories: Foam rubber, Suction plate (top)



Ordering Data Vacuum Blocks VCBL-B

Type	Dimensions (LxW):				
	120x50	125x75	130x30	140x130	
VCBL-B 29 TV	10.01.12.03167	10.01.12.03166	10.01.12.03168	10.01.12.03165	
VCBL-B 48 TV	10.01.12.03171	10.01.12.03170	10.01.12.03172	10.01.12.03169	
VCBL-B 74 TV	10.01.12.03175	10.01.12.03174	10.01.12.03176	10.01.12.03173	



Ordering Data Spare Parts Vacuum Blocks VCBL-B

Type	Spare Parts		Part no.
VCBL-B 120 x 50	Suction plate (top)	VCSP-O 120x50x15.5	10.01.12.00012
VCBL-B 125 x 75	Suction plate (top)	VCSP-O 125x75x16.5	10.01.12.00011
VCBL-B 130 x 30	Set of parts subject to wear	VST VCSP	10.01.12.02348
VCBL-B 140 x 130	Suction plate (top)	VCSP-O 140x130x16.5	10.01.12.02325

Type	Spare Parts	Part no.
VCBL-B	Touch Valve	TV D9 4.3 10.01.12.02514

Type	Spare Parts	Part no.
VCBL-B	Adapter ring	ADP-RING-100.5x15.5-VCBL-B 10.01.12.03345



Ordering Data Accessories Vacuum Blocks VCBL-B

Type	Accessories			Part no.
VCBL-B 125x75	Suction plate (top)	Foam rubber suction plate	VCSP-O 125x75x17.7 MOS	10.01.12.03511
VCBL-B 140x130	Suction plate (top)	Foam rubber suction plate	VCSP-O 140x130x18.3 MOS	10.01.12.03506

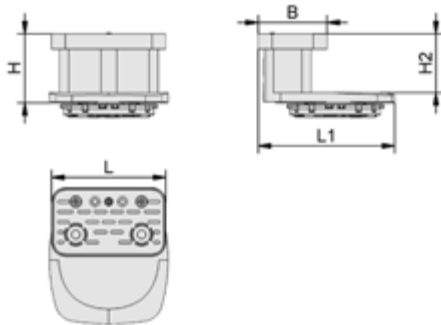
*Biesse is a registered and protected trademark. The articles listed here are products of J. Schmalz GmbH that have been designed to fit CNC machining centers from Biesse.

Vacuum Blocks VCBL-B

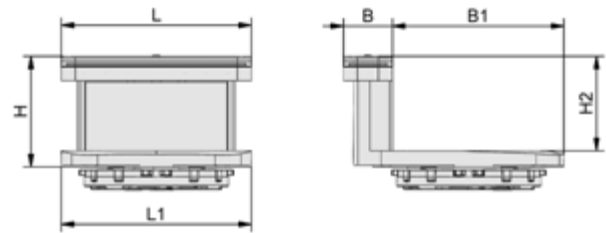
Height 29 mm, 48 mm and 74 mm



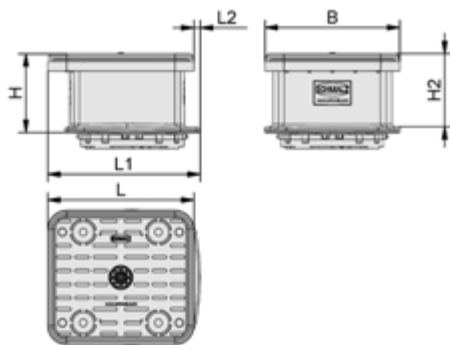
Design Data Vacuum Blocks VCBL-B



VCBL-B 120x50 - VCBL-B 125x75



VCBL-B 130x30



VCBL-B 140x130

Type	B [mm]	B1 [mm]	H [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]
VCBL-B 120x50x29 TV	50	-	29	19	120	146	-
VCBL-B 125x75x29 TV	75	-	29	19	125	146	-
VCBL-B 130x30x29 TV	34	117	29	19	130	130	-
VCBL-B 140x130x29 TV	129	-	29	26	140	146	6
VCBL-B 120x50x48 TV	50	-	48	38	120	146	-
VCBL-B 125x75x48 TV	75	-	48	38	125	146	-
VCBL-B 130x30x48 TV	34	117	48	38	130	151	-
VCBL-B 140x130x48 TV	129	-	48	44	140	146	6
VCBL-B 120x50x74 TV	50	-	74	64	120	146	-
VCBL-B 125x75x74 TV	75	-	74	64	125	149	-
VCBL-B 130x30x74 TV	34	117	74	64	130	130	-
VCBL-B 140x130x74 TV	129	-	74	70	140	146	6

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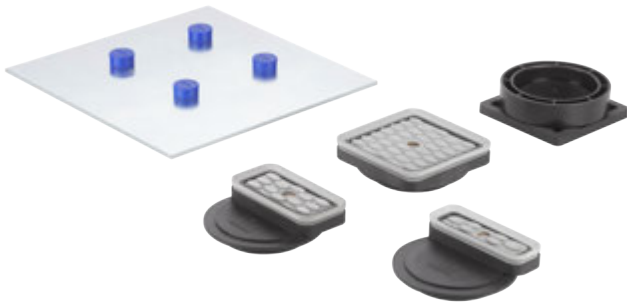
Adapter-Plates ISAP-B



Standard dimensions 195 × 195 mm, hole matrix spacing 75 mm



Suitability for Industry Specific Applications

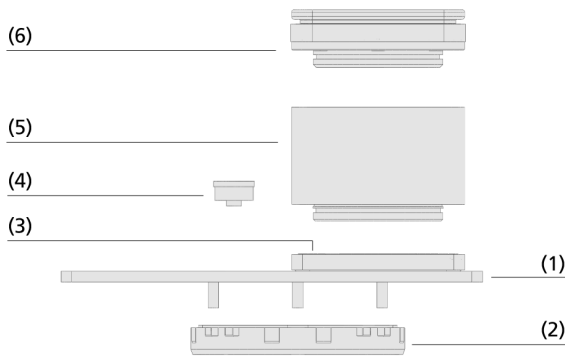


Adapter-Plates ISAP-B

Applications

- Hose-free Schmalz vacuum clamping system for console tables from Biesse with a matching suction cup mount
- The Adapter-Plates are positioned directly into the suction cup mounts on the consoles
- The Adapter-Plates can be flexibly equipped with up to four additional Mono-Bases ISMB and suction cups ISCUP
- Particularly suitable for narrow and curved workpieces with small suction surfaces and delicate molds
- The modular concept with connectible spacer rings enables various working heights, which allows for mixed use with suction cups from the original equipment manufacturer
- Non-damage and precise clamping with maximum holding force

Design



- Adapter-Plate (1) base plate
- Adapter-Ring (2) suitable for the suction cup mounts of the Biesse consoles
- Mono-Base (3) for positioning on top of vacuum openings of the Adapter-Plate and suction cup (6) for fixing the workpiece are available as accessories
- Spacer ring (5) for adjusting the height to the machining height of the machine
- Sealing magnet (4)

System Design Adapter-Plates ISAP-B



Adapter-Plates ISAP-B with Mono-Base and suction cups for clamping wooden components

Our Highlights...

- Modular system can be enhanced with various suction area sizes
- Freely position suction cups and Mono-Bases on the Adapter-Plate
- Suitable for mixed use with standard vacuum blocks
- Versatile accessories and spare parts can be interchanged without tools

Your Benefits...

- Ideal for clamping narrow or curved workpieces
- Practically every clamping layout can be achieved
- Maximum level of flexibility and shortened set-up times
- Quick, simple and cost-effective replacement of accessories and spare parts

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Adapter-Plates ISAP-B

Standard dimensions 195 × 195 mm, hole matrix spacing 75 mm



Designation Code Adapter-Plates ISAP-B

ISAP-B	–	195x195x5
1		2

1 – Abbreviated designation

Code	Type
ISAP-B	Innospann adapter plate, Biesse console system

2 – Dimensions

Code	LxWxH in mm
195x195x5	195x195x5

The adapter plate ISAP-B is delivered assembled. The product consists of:

- Base plate made of steel
- Sealing magnet for closing the vacuum openings
- Plastic adapter ring

Available spare parts: Sealing magnet

Available accessories: Mono-Base, spacer ring, suction cup



Ordering Data Adapter-Plates ISAP-B

Type	Part no.
ISAP-B 195x195x5	10.01.14.00109



Ordering Data Spare Parts Adapter-Plates ISAP-B



Type	Part no.
Sealing magnet	ISMST 19-7 4ISMST 10.01.14.00847



Ordering Data Accessories Adapter-Plates ISAP-B

Type	Part no.
Mono-Base	ISMB 80x80x8 10.01.15.00188 

Type	Part no.
Spacer ring, Innospann	ISZR-V 80x19 10.01.15.00388
Spacer ring, Innospann	ISZR-V 80x45 10.01.15.00054

Type	Part no.
Suction cup	ISCUP Cup 1 80x80x16 10.01.15.00209 
Suction cup	ISCUP Cup 2 80x40x16 10.01.15.00210 
Suction cup	ISCUP Cup 3 80x28x16 10.01.15.00211 

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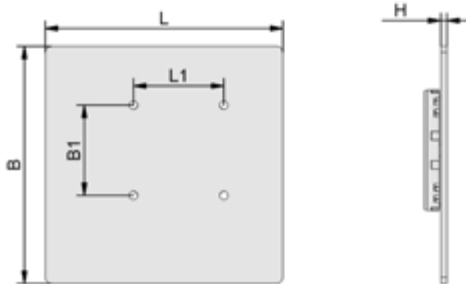


Adapter-Plates ISAP-B

Standard dimensions 195 × 195 mm, hole matrix spacing 75 mm



Design Data Adapter-Plates ISAP-B



ISAP-B

Type	B [mm]	B1 [mm]	H [mm]	L [mm]	L1 [mm]
ISAP-B 195x195x5	195	75	5	195	75

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Mechanical Clamps VCMC-B

Clamping range 25 mm to 100 mm



Suitability for Industry Specific Applications

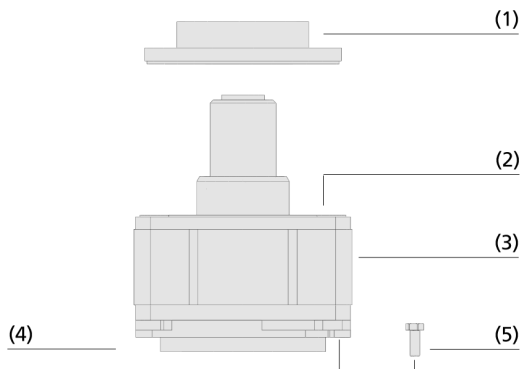


Mechanical Clamps VCMC-B

Applications

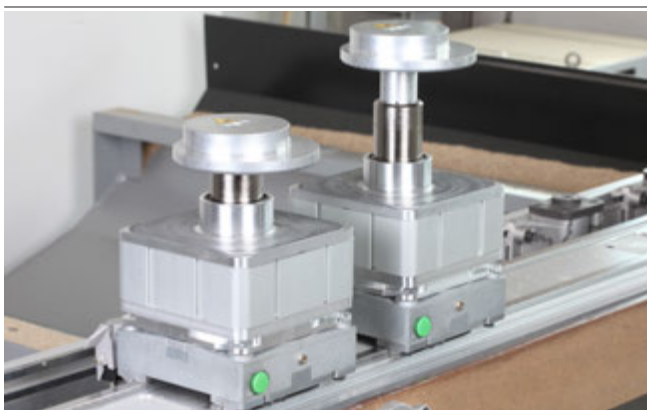
- Mechanical clamping system for console tables from Biesse with matching suction cup mount
- The mechanical clamps are actuated via vacuum so that no further medium is required at the machine for clamping
- The clamps are adapted to the mounts of the machine and fixed using a bayonet mount with two hexagon head screws
- Eccentric clamping disc provides a large clamping area and can be freely rotated for use in any orientation
- Safe clamping of narrow and curved workpieces such as frame parts and window profiles

Design



- Eccentric clamping disc (1) is pulled downwards by the vacuum of the Biesse console via a piston in the clamp
- Friction material (2) for optimization lateral force absorption
- Main body made of aluminum (3) with interface (4) to the Biesse console
- Hexagon head screws (5) for fixing the clamp to the mount

System Design Mechanical Clamps VCMC-B



Mechanical Clamps VCMC-B for clamping of narrow workpieces

Our Highlights...

- Eccentrically positioned clamping discs
- Clamping forces of up to 700 N
- Actuated via the operating vacuum of the CNC machining center
- Special friction materials on clamping disc and clamping surface

Your Benefits...

- Optimal use of the available clamping surface
- Maximum holding force even with narrow workpieces
- No additional medium required at the machine
- Extra resistance to lateral forces

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Mechanical Clamps VCMC-B

Clamping range 25 mm to 100 mm



Designation Code Mechanical Clamps VCMC-B

VCMC-B	–	130x130x74	–	25-100
1		2		3

1 – Abbreviated designation

Code	Type
VCMC-B	Mechanical clamp, Biesse system

2 – Dimensions

Code	LxWxH in mm
130x130x74	130x130x74

3 – Clamping range

Code	Clamping range in mm
25-100	25-100

The Mechanical Clamp VCMC-B is delivered assembled. The product consists of:

- Clamping disc
- Main body made of aluminium

Available spare parts: Clamping disc



Ordering Data Mechanical Clamps VCMC-B

Type	Part no.
VCMC-B 130x130x74 25-100	10.01.12.03129



Ordering Data Spare Parts Mechanical Clamps VCMC-B

Type	Part no.
Clamping disc Eccentrically flat	SPAN-TELL 110x14 EX VCMC 10.01.12.01980
Clamping disc Eccentrically standard	SPAN-TELL 110x25.5 EX VCMC 10.01.12.01930
Clamping disc Eccentrically high	SPAN-TELL 110x40.5 EX VCMC 10.01.12.01936



Technical Data Mechanical Clamps VCMC-B

Type	Clamping range [mm]	Weight [kg]
VCMC-B 130x130x74 25-100	25 ... 100	3.3

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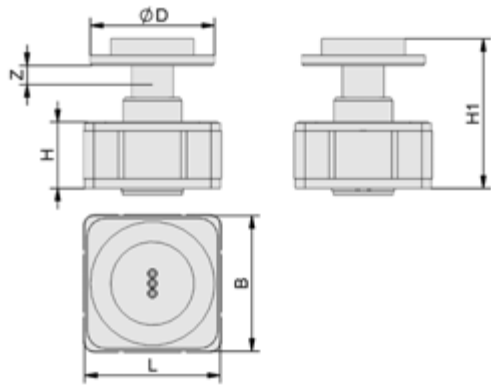


Mechanical Clamps VCMC-B

Clamping range 25 mm to 100 mm



Design Data Mechanical Clamps VCMC-B



VCMC-B

Type	B [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	Z (Stroke) [mm]
VCMC-B 130x130x74 25-100	130	110	74	144	130	25

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Vacuum Blocks VCBL-S

Height 32.7 mm and 50 mm



Suitability for Industry Specific Applications

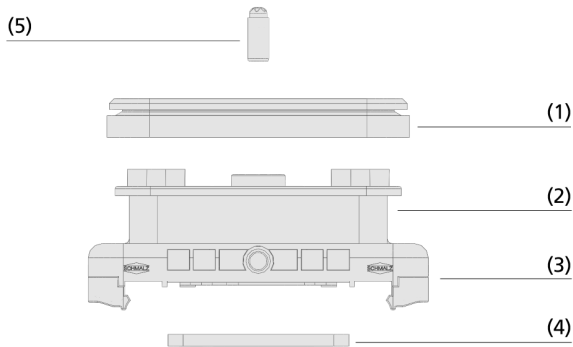


Vacuum Blocks VCBL-S

Applications

- Hose-free vacuum clamping system for console tables from SCM / Morbidelli, fully compatible with OEM vacuum blocks
- The vacuum blocks are pre-fixed to the console
- An integrated touch valve enables unused vacuum blocks to remain on the machine table
- TV system from SCM = S1 system from Schmalz (width of the console 72.5 mm)
- TVS system from SCM = S1 system from Schmalz with hose connection (width of the console 72.5 mm)
- TVN system from SCM = S4 system from Schmalz (width of the console = 109 mm)

Design



- Upper suction plate (1) for fixing the workpiece
- Robust plastic main body (2)
- Dovetail mount (3) for mechanical pre-fastening on SCM / Morbidelli consoles
- Sealing frame (4) optimized to allow easy repositioning of the suction cup on the console
- Touch valve (5) for activating the vacuum

System Design Vacuum Blocks VCBL-S



Vacuum block VCBL-S4 used with SCM consoles

Our Highlights...

- Sealing edges and friction surfaces tailored for wooden surfaces
- High dimensional accuracy
- Large selection of different designs
- Replacement suction plates can be exchanged without tools

Your Benefits...

- Extremely high resistance to lateral forces
- Enables highest accuracy in the production process
- Maximum flexibility and set-up time reduction
- Fast, easy and cost effective replacement of suction plates

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Vacuum Blocks VCBL-S

Height 32.7 mm and 50 mm



Designation Code Vacuum Blocks VCBL-S

VCBL-S4	-	140x130	-	x50	-	D-360	-	TV
1		2		3		4		5

1 – Abbreviated designation

Code	Type
VCBL-S1	Vacuum block, SCM / Morbidelli TV-System
VCBL-S4	Vacuum block, SCM/Morbidelli TVN-System

4 – Product addition

Code	Type
D-360	Rotatable by 360°

2 – Suction area

Code	LxW in mm
120x50...	120x50 to 140x130
140x130	

5 – Product addition

Code	Type
TV	With touch valve
TV-S	With touch valve and hose connection

3 – Height

Code	Height in mm
x32.7...	32.7 and 50
x50	

The vacuum block VCBL-S is delivered assembled. The product consists of:

- Top suction plate type VCSP-O - elastomer part, available in various dimensions and suction surfaces
- Main body made of plastic
- Bottom sealing frame

Available spare parts: suction plate, sealing frame, touch valve TV, wearing parts kit

Available accessories: Suction plate (foam rubber)



Ordering Data Vacuum Blocks VCBL-S

Type				Dimensions (LxW):			
				120x50	120x120	125x75	130x30
VCBL-S1	32.7	D-360	TV	10.01.12.01301	-	10.01.12.01302	10.01.12.01300
VCBL-S1	32.7	-	TV	10.01.12.02319	10.01.12.02317	10.01.12.02318	10.01.12.02320
VCBL-S1	32.7	-	TV-S	10.01.12.02388	10.01.12.02386	10.01.12.02387	10.01.12.02389
VCBL-S1	50.0	D-360	TV	10.01.12.02271	-	-	-
VCBL-S1	50.0	-	TV	10.01.12.02591	10.01.12.02969	10.01.12.03495	10.01.12.02945

Type				Dimensions (LxW):			
				120x50	125x75	130x30	140x130
VCBL-S4	50	D-360	TV	10.01.12.01474	10.01.12.01473	10.01.12.01475	-
VCBL-S4	50	-	TV	10.01.12.02323	10.01.12.02322	10.01.12.02324	10.01.12.02321

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Vacuum Blocks VCBL-S

Height 32.7 mm and 50 mm



Ordering Data Spare Parts Vacuum Blocks VCBL-S

Type	Spare Parts			Part no.
VCBL-S1 120x50	Suction plate (top)	VCSP-O 120x50x15.5		10.01.12.00012
VCBL-S1 120x120	Suction plate (top)	VCSP-O 120x120x16.5		10.01.12.00010
VCBL-S1 125x75	Suction plate (top)	VCSP-O 125x75x16.5		10.01.12.00011
VCBL-S1 130x30	Set of parts subject to wear	VST VCSP		10.01.12.01543
VCBL-S4 120x50	Suction plate (top)	VCSP-O 120x50x15.5		10.01.12.00012
VCBL-S4 125x75	Suction plate (top)	VCSP-O 125x75x16.5		10.01.12.00011
VCBL-S4 130x30	Set of parts subject to wear	VST VCSP		10.01.12.01543
VCBL-S4 140x130	Suction plate (top)	VCSP-O 140x130x16.5		10.01.12.02325

Type	Spare Parts		Part no.
VCBL-S1	Touch valve	TV D9 4.3	10.01.12.02514
VCBL-S4	Touch valve	TV D9 4.3	10.01.12.02514

Type	Spare Parts			Part no.
VCBL-S1	Set of parts subject to wear	Bottom sealing frame	VST VCBL-S DI-RA	10.01.12.03573
VCBL-S4	Set of parts subject to wear	Bottom sealing frame	VST VCBL-S DI-RA	10.01.12.03318



Ordering Data Accessories Vacuum Blocks VCBL-S

Type	Accessories			Part no.
VCBL-S1 120x120	Suction plate (top)	Foam rubber suction plate	VCSP-O 120x120 MOS	10.01.12.01341
VCBL-S1 125x75	Suction plate (top)	Foam rubber suction plate	VCSP-O 125x75x17.7 MOS	10.01.12.03511
VCBL-S4 125x75	Suction plate (top)	Foam rubber suction plate	VCSP-O 125x75x17.7 MOS	10.01.12.03511
VCBL-S4 140x130	Suction plate (top)	Foam rubber suction plate	VCSP-O 140x130x18.3 MOS	10.01.12.03506

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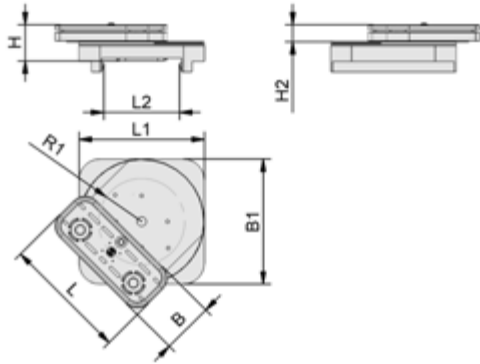


Vacuum Blocks VCBL-S

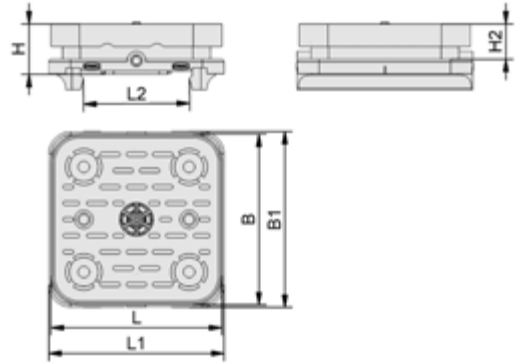
Height 32.7 mm and 50 mm



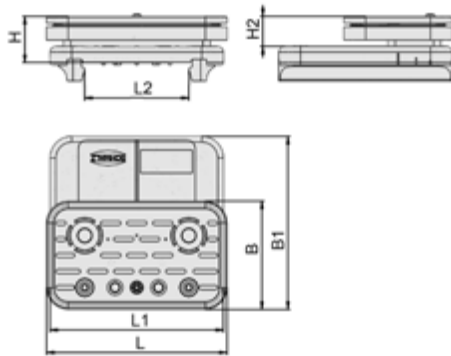
Design Data Vacuum Blocks VCBL-S



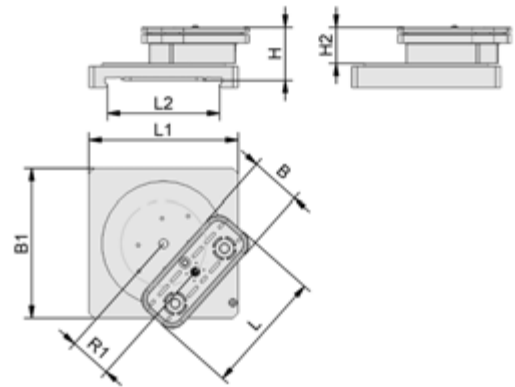
VCBL-S1 D-360



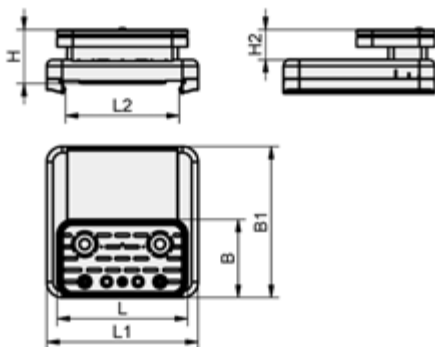
VCBL-S1 120x120



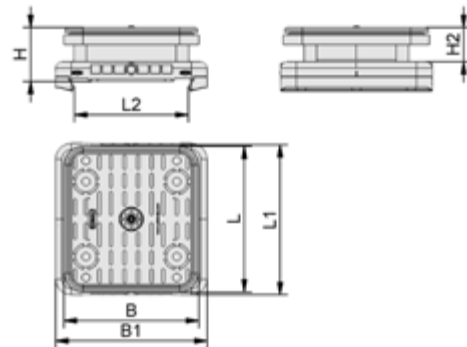
VCBL-S1 120x50, VCBL-S1 125x75, VCBL-S1 130x30



VCBL-S4 D-360



VCBL-S4 120x50 - VCBL-S4 130x30



VCBL-S4 140x130

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Vacuum Blocks VCBL-S

Height 32.7 mm and 50 mm



Design Data Vacuum Blocks VCBL-S

Type	B [mm]	B1 [mm]	H [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	R1 [mm]
VCBL-S1 120x50x32.7 D-360 TV	50	120	32.7	16	120	120	72.5	42
VCBL-S1 120x50x32.7 TV	50	120	32.7	20	120	120	72.5	-
VCBL-S1 120x50x32.7 TV-S	50	120	32.7	20	120	120	72.5	-
VCBL-S1 120x120x32.7 TV	120	120	32.7	23	120	120	72.5	-
VCBL-S1 120x120x32.7 TV-S	120	120	32.7	23	120	120	72.5	-
VCBL-S1 125x75x32.7 D-360 TV	75	120	32.7	15	125	120	72.5	14
VCBL-S1 125x75x32.7 TV	75	120	32.7	20	125	120	72.5	-
VCBL-S1 125x75x32.7 TV-S	75	120	32.7	20	125	120	72.5	-
VCBL-S1 130x30x32.7 D-360 TV	30	120	32.7	15	130	120	72.5	42
VCBL-S1 130x30x32.7 TV	30	120	32.7	20	130	120	72.5	-
VCBL-S1 130x30x32.7 TV-S	30	120	32.7	20	130	120	72.5	-
VCBL-S1 120x50x50 D-360 TV	50	120	50.0	32	120	120	72.5	42
VCBL-S1 120x50x50 TV	50	120	50.0	37	120	120	72.5	-
VCBL-S1 120x120x50 TV	120	120	50.0	32	120	120	72.5	-
VCBL-S1 125x75x50 TV	75	120	50.0	38	125	120	72.5	-
VCBL-S1 130x30x50 TV	30	120	50.0	37	130	120	72.5	-

Type	B [mm]	B1 [mm]	H [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	R1 [mm]
VCBL-S4 120x50x50 D-360 TV	50	145	50	34	120	145	109	42
VCBL-S4 120x50x50 TV	50	145	50	27	120	145	109	-
VCBL-S4 125x75x50 D-360 TV	75	145	50	34	125	145	109	23
VCBL-S4 125x75x50 TV	75	145	50	27	125	145	109	-
VCBL-S4 130x30x50 D-360 TV	30	145	50	34	130	145	109	42
VCBL-S4 130x30x50 TV	30	145	50	27	130	145	109	-
VCBL-S4 140x130x50 TV	130	145	50	32	140	145	109	-

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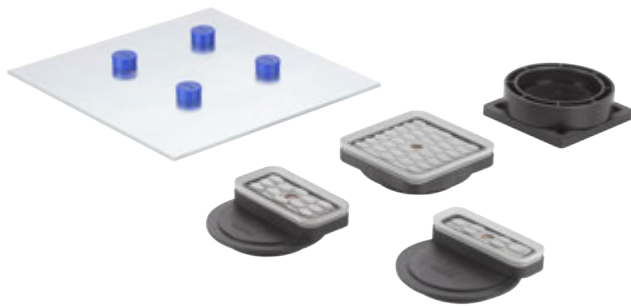


Adapter-Plates ISAP-S

Standard dimensions 195 x 195 mm, hole matrix spacing 75 mm



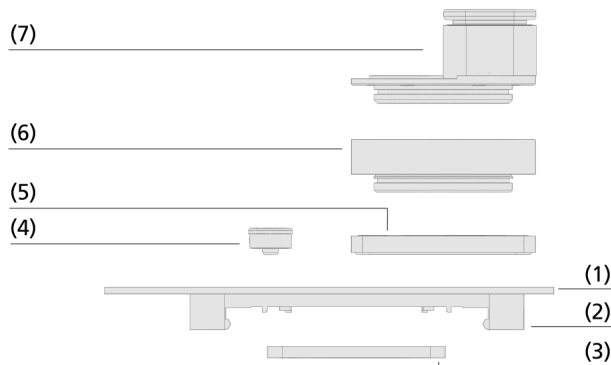
Suitability for Industry Specific Applications



Adapter-Plates ISAP-S

Applications

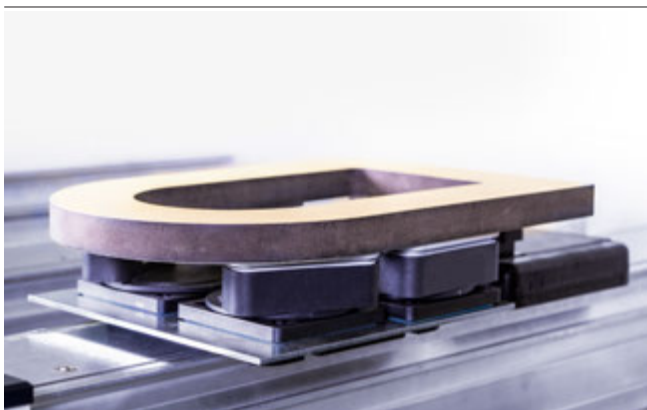
- Hose-free clamping system for console tables from SCM / Morbidelli, fully compatible with the original equipment
- The Adapter-Plates are positioned directly onto the vacuum supply on the consoles
- Equipping the ISAP-S with up to four additional Mono-Bases and suction cups
- Particularly suitable for narrow and curved workpieces with small suction surfaces and delicate molds
- Connectible spacer rings allow for various working heights
- TV system from SCM = S1 system from Schmalz (width of the console 72.5 mm)
- TVN System from SCM = S4 System from Schmalz (width of the console 109 mm)



System Design Adapter-Plates ISAP-S

Design

- Adapter-Plate (1) base plate
- Dovetail mount (2) for mechanical pre-fastening on SCM / Morbidelli consoles
- Sealing frame (3) optimized to allow easy repositioning of the Adapter-Plate on the console; closing magnet (4)
- Mono-Base (5) for positioning on top of the vacuum openings of the Adapter-Plate and suction cup (7) for fixing the workpiece are available as accessories
- Spacer ring (6) for adjusting the height to the machining height of the machine



Adapter-Plates ISAP-S with Mono-Base and suction cups for clamping of curved boards

Our Highlights...

- Modular system can be enhanced with various suction area sizes
- Suction cups and Mono-Bases can be positioned freely on the Adapter-Plate
- Suitable for mixed use with standard vacuum blocks
- Versatile accessories and spare parts can be exchanged without tools

Your Benefits...

- Ideal for clamping narrow or curved workpieces
- Practically every clamping layout can be achieved
- Maximum level of flexibility and shortened set-up times
- Quick, simple and cost-effective replacement of accessories and spare parts

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Adapter-Plates ISAP-S

Standard dimensions 195 × 195 mm, hole matrix spacing 75 mm



Designation Code Adapter-Plates ISAP-S

ISAP-S1	–	195x195x8.7
1		2

1 – Abbreviated designation

Code	Type
ISAP-S1	Innospann adapter plate, SCM / Morbidelli TV-System
ISAP-S4	Innospann adapter plate, SCM / Morbidelli TVN-System

2 – Dimensions

Code	LxWxH in mm
195x195x8.7	195x195x8.7
195x195x11	195x195x11

The adapter plates ISAP-S1 and ISAP-S4 are delivered assembled. The products consist of:

- Main body of aluminum
- Sealing magnet for closing the vacuum openings

Available spare parts: Sealing magnets, wearing parts kit

Available accessories: Mono-Base, spacer ring, suction cups



Ordering Data Adapter-Plates ISAP-S

Type	Part no.
ISAP-S1 195x195x8.7	10.01.14.00123
ISAP-S4 195x195x11	10.01.14.00231



Ordering Data Spare Parts Adapter-Plates ISAP-S

Type	Spare Parts		Part no.
ISAP-S1 195x195x8.7	Sealing magnet	ISMST 19-7 4ISMST	10.01.14.00847
ISAP-S4 195x195x11	Sealing magnet	ISMST 19-7 4ISMST	10.01.14.00847

Type	Spare Parts			Part no.
ISAP-S1	Set of parts subject to wear	Bottom sealing frame	VST VCBL-S DI-RA	10.01.12.03573
ISAP-S4	Set of parts subject to wear	Bottom sealing frame	VST VCBL-S DI-RA	10.01.12.03318

*SCM / Morbidelli is a registered and protected trademark. The articles listed here are products of J. Schmalz GmbH that have been designed to fit CNC machining centers from SCM / Morbidelli.



Adapter-Plates ISAP-S

Standard dimensions 195 × 195 mm, hole matrix spacing 75 mm



Ordering Data Accessories Adapter-Plates ISAP-S

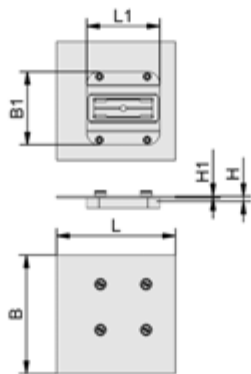
Type		Part no.
Mono-Base	ISMB 80x80x8	10.01.15.00188

Type		Part no.
Spacer ring, Innospann	ISZR-V 80x15	10.01.15.00052

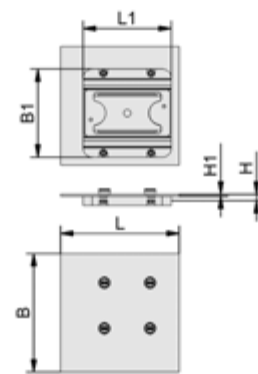
Type		Part no.
Cup	ISCUP Cup 1 80x80x16	10.01.15.00209
Cup	ISCUP Cup 2 80x40x16	10.01.15.00210
Cup	ISCUP Cup 3 80x28x16	10.01.15.00211



Design Data Adapter-Plates ISAP-S



ISAP-S1



ISAP-S4

Type	B [mm]	B1 [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]
ISAP-S1 195x195x8.7	195	120	9	28	195	120
ISAP-S4 195x195x11	195	145	11	28	195	145

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Adapter-Plates AP-S4

Holder for suction blocks VCBL-B



Suitability for Industry Specific Applications

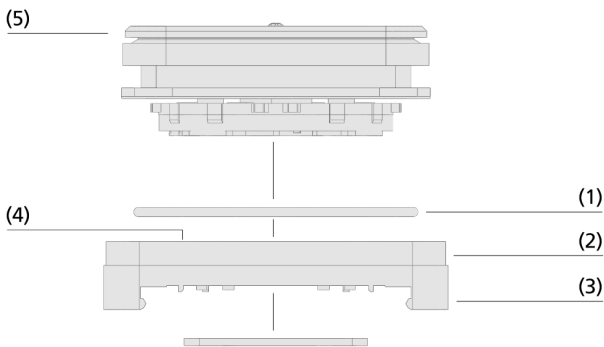


Adapter-Plates AP-S4

Applications

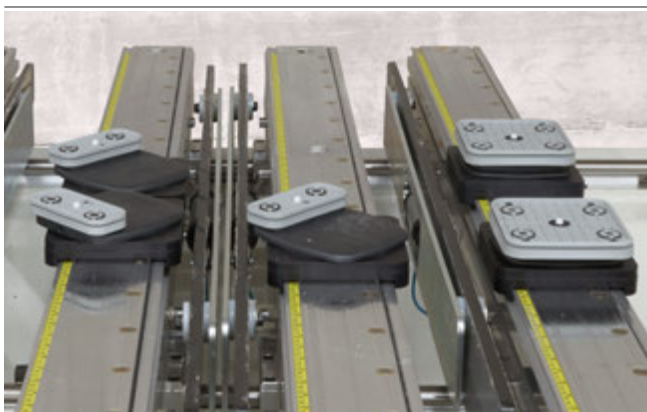
- Specially developed Adapter-Plate for using vacuum blocks VCBL-B on console table systems from SCM / Morbidelli
- The Adapter-Plates are used on the TVN consoles of SCM / Morbidelli (console width 109 mm) and are mechanically pre-fastened to the console
- Vacuum blocks VCBL-B are placed into the suction cup mount of the Adapter-Plate at any orientation in 15° steps to orient the suction area as desired

Design



- Sealing ring (1) for sealing against the bottom surface of suction cup
- Robust plastic body (2)
- Dovetail mount (3) for mechanical pre-fastening in TVN consoles from SCM / Morbidelli
- Suction cup mount (4) matches vacuum blocks VCBL-B
- Vacuum block VCBL-B (5) are available as accessories

System Design Adapter-Plates AP-S4



Adapter-Plates AP-S4 with vacuum block VCBL-B for clamping of different workpiece sizes

Our Highlights...

- Modular system of Adapter-Plate and suction cups
- Suction cups available in various overall heights
- Overall heights compatible with VCBL-S4 suction cups and originally fitted suction cups
- Series-produced touch valve in the vacuum blocks VCBL-B

Your Benefits...

- Maximum flexibility in positioning of the suction cups
- Multiple working heights available all the way up to five-axis machining
- Mixed operation possible if necessary
- Unused suction cups can remain on the machine table

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Adapter-Plates AP-S4

Holder for suction blocks VCBL-B



Designation Code Adapter-Plates AP-S4

AP-S4	–	145x145x21
1		2

1 – Abbreviated designation

Code	Type
AP-S4	Adapter-Plate, SCM / Morbidelli TVN-system

2 – Dimensions

Code	LxWxH in mm
145x145x21	145x145x21

The adapter plate AP-S4 is delivered assembled. The product consists of:

- Base body made of plastic
- S4 Lower sealing frame

Available spare parts: Sealing frame

Available accessories: Vacuum blocks VCBL-B



Ordering Data Adapter-Plates AP-S4

Type	Part no.
AP-S4-145x145x21	10.01.12.03623 







Ordering Data Spare Parts Adapter-Plates AP-S4

Type	Part no.
Sealing frame (bottom)	VCDR 125x77.2x3.1 ISAP 10.01.12.03746



Ordering Data Accessories Adapter-Plates AP-S4

Type	Part no.
Vacuum block	VCBL-B 120x50x29 TV 10.01.12.03167 
Vacuum block	VCBL-B 125x75x29 TV 10.01.12.03166 
Vacuum block	VCBL-B 130x30x29 TV 10.01.12.03168 
Vacuum block	VCBL-B 140x130x29 TV 10.01.12.03165 

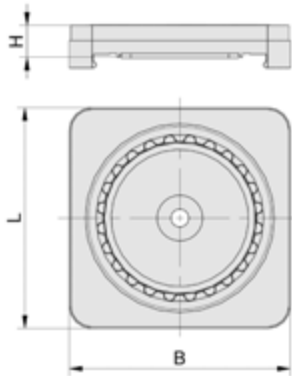
*SCM / Morbidelli is a registered and protected trademark. The articles listed here are products of J. Schmalz GmbH that have been designed to fit CNC machining centers from SCM / Morbidelli.

Adapter-Plates AP-S4

Holder for suction blocks VCBL-B



Design Data Adapter-Plates AP-S4



AP-S4

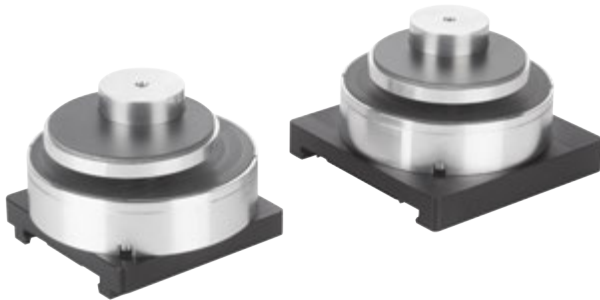
Type	B [mm]	H [mm]	L [mm]
AP-S4-145x145x21	145	21	145

*SCM / Morbidelli is a registered and protected trademark. The articles listed here are products of J. Schmalz GmbH that have been designed to fit CNC machining centers from SCM / Morbidelli.

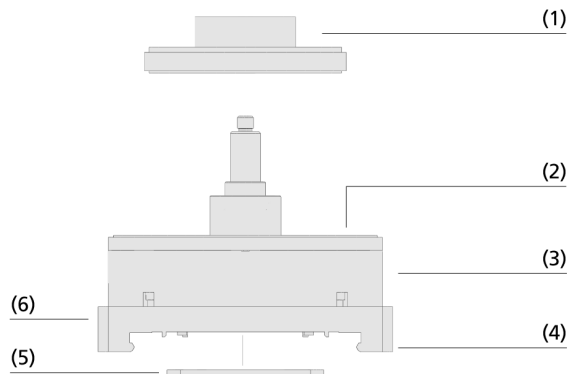


Mechanical Clamps VCMC-S

Clamping range 12 mm to 80 mm



Mechanical Clamps VCMC-S



System Design Mechanical Clamps VCMC-S

Suitability for Industry Specific Applications

Applications

- Mechanical clamping system for CNC machining centers from SCM / Morbidelli
- The clamps are mechanically pre-fastened to the console and actuated via vacuum so that no further medium is required for clamping
- The eccentric clamping disc provides a large clamping area and can be freely rotated for use in any orientation
- Safe clamping of narrow and curved workpieces such as frame parts and window profiles
- TV system from SCM = S1 system from Schmalz (width of the console = 72.5 mm)
- TVN system from SCM = S4 system from Schmalz (width of the console = 109 mm)

Design

- Excentric clamping disc (1) is pulled downward by the vacuum of the console via a piston in the clamp
- Friction material (2) to improve the absorption of lateral forces
- Main body made of aluminum (3) with interface (4) to the console
- Sealing frame (5) optimized to allow easy repositioning of the clamp on the console
- Dovetail mount (6) for mechanically pre-fastening to SCM / Morbidelli consoles



Mechanical Clamps VCMC-S4 for clamping wooden parts

Our Highlights...

- Eccentrically positioned clamping discs
- Clamping forces of up to 700 N
- Actuated via the operating vacuum of the CNC machining center
- Special friction materials on clamping disc and clamping surface

Your Benefits...

- Optimum use of the available clamping surface
- Maximum holding force even with narrow workpieces
- No additional medium required at the machine
- Extra resistance to lateral forces

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Mechanical Clamps VCMC-S

Clamping range 12 mm to 80 mm



Designation Code Mechanical Clamps VCMC-S

VCMC-S4	–	145x145x50	–	12-80
1		2		3

1 – Abbreviated designation

Code	Type
VCMC-S1	Mechanical clamp, SCM / Morbidelli TV-System
VCMC-S4	Mechanical clamp, SCM / Morbidelli TVN-System

2 – Dimensions

Code	LxWxH in mm
120x120x50...	120x120x50 and 145x145x50
145x145x50	145x145x50

3 – Clamping range

Code	Clamping range in mm
12-80	12-80

The Mechanical Clamps VCMC-S1 and VCMC-S4 are delivered assembled. The products consist of:

- Clamping disc
- Main body made of aluminium

Available spare parts: Clamping disc, Wear part set



Ordering Data Mechanical Clamps VCMC-S

Type	Part no.
VCMC-S1 120x120x50 12-80	10.01.12.01768
VCMC-S4 145x145x50 12-80	10.01.12.01481



Ordering Data Spare Parts Mechanical Clamps VCMC-S

Type	Spare Parts	Part no.
VCMC-S1 120x120x50 12-80	Clamping disc	SPAN-TELL 100x27.5 EXZ 12-80 VCMC
VCMC-S4 145x145x50 12-80	Clamping disc	SPAN-TELL 100x27.5 EXZ 12-80 VCMC

Type	Spare Parts	Part no.
VCMC-S1 120x120x50 12-80	Set of parts subject to wear	VST VCBL-S DI-RA
VCMC-S4 145x145x50 12-80	Set of parts subject to wear	VST VCBL-S DI-RA



Technical Data Mechanical Clamps VCMC-S

Type	Clamping range [mm]	Weight [g]
VCMC-S1 120x120x50 12-80	12 ... 80	1,608
VCMC-S4 145x145x50 12-80	12 ... 80	1,690

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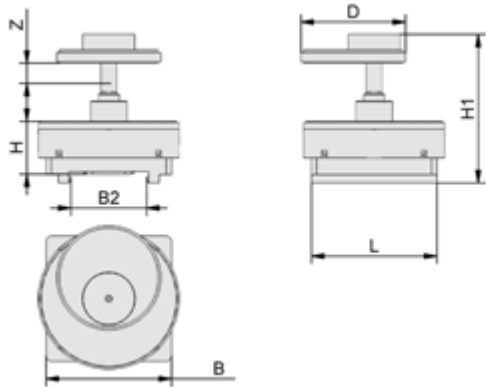


Mechanical Clamps VCMC-S

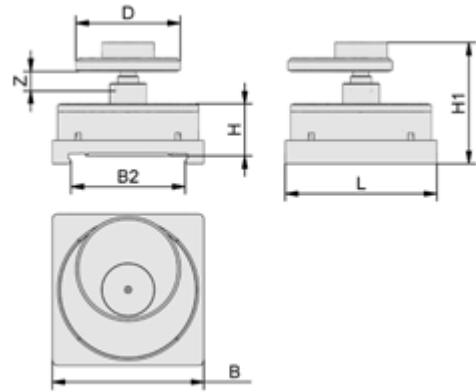
Clamping range 12 mm to 80 mm



Design Data Mechanical Clamps VCMC-S



VCMC-S1



VCMC-S4

Type	B [mm]	B2 [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	Z (Stroke) [mm]
VCMC-S1 120x120x50 12-80	120	72.5	135	50	96	120	10
VCMC-S4 145x145x50 12-80	145	109.0	135	50	94	145	10

*SCM / Morbidelli is a registered and protected trademark. The articles listed here are products of J. Schmalz GmbH that have been designed to fit CNC machining centers from SCM / Morbidelli.



Clamping Equipment for Grid and Nesting Table Systems



Overview of Section

At A Glance

Selection Aid

Page



Design of Grid Table Systems Measuring the Grid Dimensions Correctly

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Clamping Equipment for Grid Table Systems



Vacuum Block VCBL-R

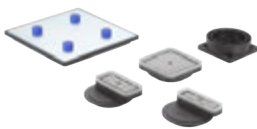
- Vacuum system for grid tables
- Fixation via positioning inserts
- Integrated touch valve



Vacuum block VCBL-R for use in CNC machining centers with all common grid table designs.



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Adapter-Plates ISAP-R

- Vacuum system for grid tables
- Use of Innospann vacuum cups



Innospann Adapter-Plate ISAP-R for use in CNC machining centers with all common grid table designs.

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Adapter-Plates AP-R

- Vacuum system for grid tables
- For all common grid geometries
- Use with VCBL-B



Adapter-Plate AP-R in combination with vacuum blocks VCBL-B for use in CNC machining centers with all common grid table designs.



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Mechanical Clamps VCMC-R

- Vacuum system for grid tables
- For frame and window profiles



Mechanical clamp VCMC-R for use in CNC machining centers with all common grid table designs.

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Clamping Equipment for Nesting Table Systems



Vacuum Blocks VCBL-G-K1

- Vacuum system for nesting machine tables
- With a hose connection
- Target value for operating vacuum: -600 mbar



Vacuum Blocks VCBL-G-K1 for use directly on the MDF wear plate of a CNC machining center with a nesting machine table.



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Adapter-Plate AP-G

- Vacuum system for nesting machine tables
- With a hose connection
- Target value for operating vacuum: -600 mbar



Adapter-Plate AP-G with vacuum blocks VCBL-B for use directly on the MDF wear plate of a CNC machining center with a nesting machine table.



85

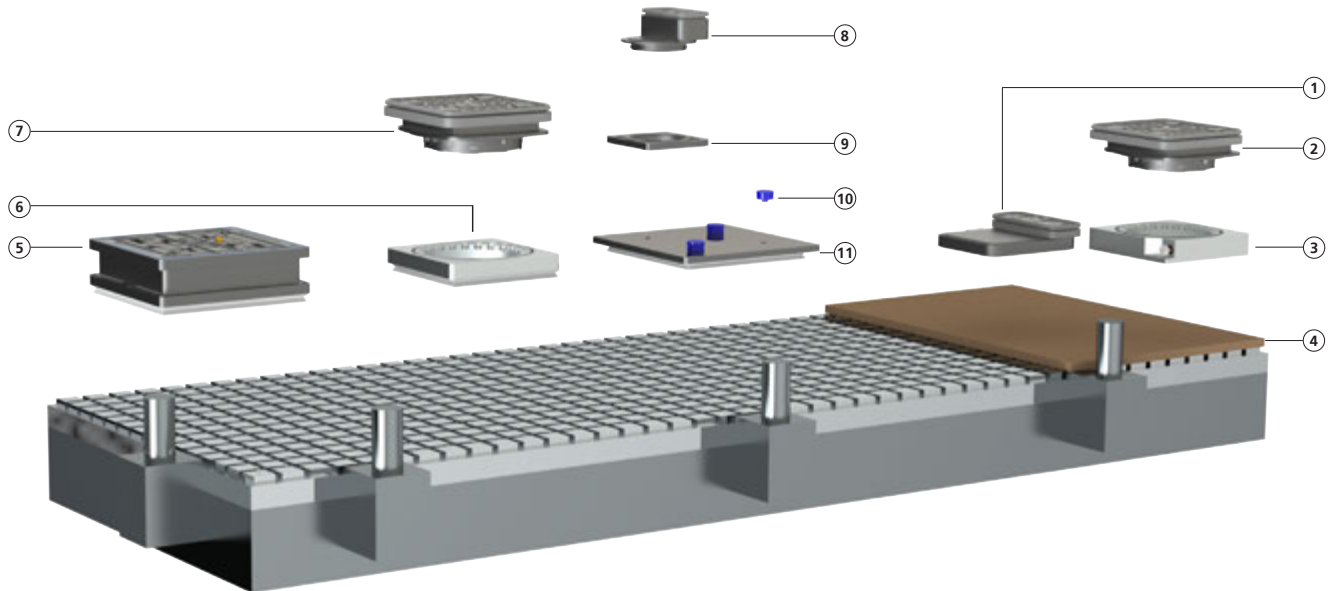
Schmalz Select preferred product range – Article selection in the product family. Further information: WWW.SCHMALZ.COM/SELECT



Selection Aid

At a Glance

Design of Grid Table Systems



Vacuum blocks for nesting tables

- ① Vacuum blocks VCBL-G-K1

Adapter-Plate system for nesting tables

- ② Vacuum blocks VCBL-B
- ③ Adapter-Plate AP-G
- ④ Wear plate

Vacuum blocks for grid tables

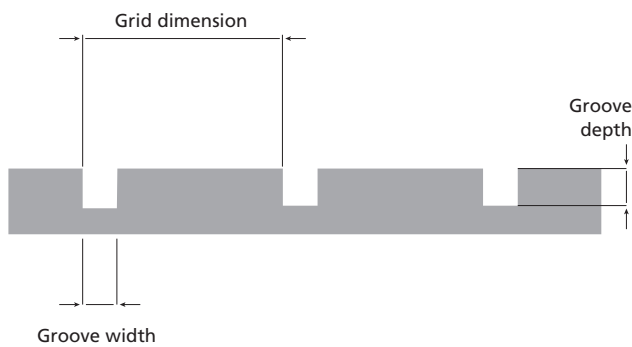
- ⑤ Vacuum blocks VCBL-R

Adapter-Plate system for grid tables

- ⑥ Adapter-Plate AP-R
- ⑦ Vacuum blocks VCBL-B

Innospann system

- ⑧ Suction cups ISCUP
- ⑨ Mono-Base ISMB
- ⑩ Sealing magnet
- ⑪ Innospann Adapter-Plate ISAP-R



Measuring the Grid Dimensions Correctly

Schmalz offers vacuum blocks for grid tables with all common grid geometries. The grid dimensions are listed in the technical data for the particular product family.

The figure shows how to correctly measure the grid dimensions, the groove width and the groove depth.

Vacuum block VCBL-R

Height 25 mm, 45 mm and 125 mm



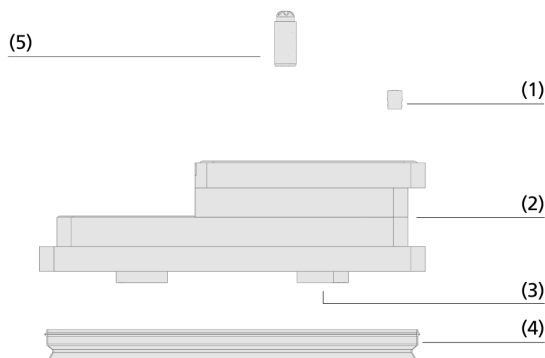
Suitability for Industry Specific Applications



Applications

- Vacuum clamping system for CNC machining centers with grid table
- Suitable for all common grid geometries (slot width 6 mm to 7.5 mm, slot depth 6 mm to 7 mm)
- Suitable for complex five-axis processing, such as the production of recesses and the trimming of panels
- Simple and fast positioning of the vacuum blocks with the corresponding positioning inserts
- Safe and non-slip clamping of the workpiece with the special friction pad on the suction area

Vacuum block VCBL-R



Design

- Friction pad (1) for absorption of lateral forces
- Sturdy plastic main body (2)
- Positioning insert (3) for various groove widths
- Inserts are easy to change so that the vacuum block can be used for different grid sizes
- Sealing frame (4)
- Touch valve (5) made of soft plastic

System Design Vacuum block VCBL-R



Vacuum blocks VCBL-R for gripping particle boards

Our Highlights...

- Sealing and friction pads tailored for wooden surfaces
- High dimensional accuracy
- Large selection of different designs
- Differing overall heights available
- Wide selection of accessories and spare parts

Your Benefits...

- Extremely high resistance to lateral forces
- Enables highest accuracy in the production process
- Maximum flexibility and set-up time reduction
- Used for complex lateral machining
- Long service life and quick, cost-effective replacement

Vacuum block VCBL-R

Height 25 mm, 45 mm and 125 mm



Designation Code Vacuum block VCBL-R

VCBL-R	-	160x160	-	x125	-	30x30	-	TV
1		2		3		4		5

1 – Abbreviated designation

Code	Type
VCBL-R	Vacuum block, grid table system

2 – Suction area

Code	LxW in mm
110x110...	110x110 to 160x160
160x160	

3 – Height

Code	Height in mm
x25...x125	25 to 125

4 – Grid dimensions

Code	Grid dimension in mm
30x30	30x30
30/50	30x30 to 50x50
40x40	40x40

5 – Product addition

Code	Type
TV	With touch valve

The vacuum block VCBL-R is delivered assembled. The product consists of:

- Top sealing frame Type VCDR
- Base body made of plastic
- Bottom sealing frame

Available spare parts: Touch valve, locking angle and screws, gaskets and friction linings



Ordering Data Vacuum block VCBL-R

Type				Dimensions (LxW):		
				110x110	160x96	160x160
VCBL-R	25	30/50	TV	-	10.01.12.02676	10.01.12.02674
VCBL-R	25	40x40	TV	-	10.01.12.02677	10.01.12.02675
VCBL-R	45	30x30	TV	10.01.12.02883	-	10.01.12.03039
VCBL-R	45	30/50	TV	-	10.01.12.02672	10.01.12.02670
VCBL-R	45	40x40	TV	-	10.01.12.02673	10.01.12.02671
VCBL-R	125	30x30	TV	-	-	10.01.12.03249
VCBL-R	125	30/50	TV	-	10.01.12.03422	-



Ordering Data Spare Parts Vacuum block VCBL-R

Type		Part no.
Touch Valve	TV D9 4.3	10.01.12.02514

Type*		Part no.
Locking angle and screws	ERS-SET VCBL-R angle	10.01.12.02691
Gaskets and friction linings	ERS-SET VCBL-R	10.01.12.02693

*Spare parts do not match VCBL-R 110x110



Vacuum block VCBL-R

Height 25 mm, 45 mm and 125 mm

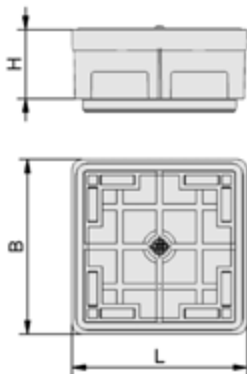


Technical Data Vacuum block VCBL-R

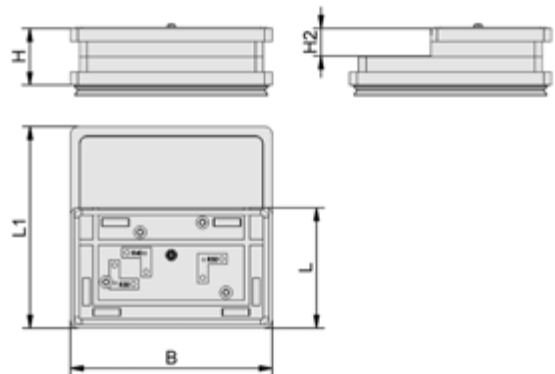
Type	Recommended slot width x slot depth [mm]
VCBL-R 110x110x45 30x30 TV	6.4x6.1
VCBL-R 160x96x25 30/50 TV	6.5x6.5 / 7.5x7.5
VCBL-R 160x96x25 40x40 TV	6.5x6.5 / 7.5x7.5
VCBL-R 160x96x45 30/50 TV	6.5x6.5 / 7.5x7.5
VCBL-R 160x96x45 40x40 TV	6.5x6.5 / 7.5x7.5
VCBL-R 160x96x125 30/50 TV	6.5x6.5 / 7.5x7.5
VCBL-R 160x160x25 30/50 TV	6.5x6.5 / 7.5x7.5
VCBL-R 160x160x25 40x40 TV	6.5x6.5 / 7.5x7.5
VCBL-R 160x160x45 30x30 TV	6.4x6.1
VCBL-R 160x160x45 30/50 TV	6.5x6.5 / 7.5x7.5
VCBL-R 160x160x45 40x40 TV	6.5x6.5 / 7.5x7.5
VCBL-R 160x160x125 30x30 TV	6.4x6.1



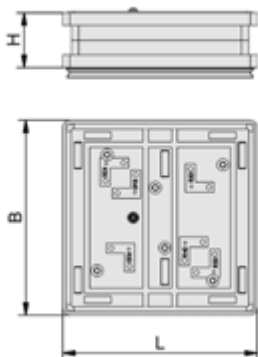
Design Data Vacuum block VCBL-R



VCBL-R 110x110



VCBL-R 160x96



VCBL-R 160x160

Vacuum block VCBL-R

Height 25 mm, 45 mm and 125 mm

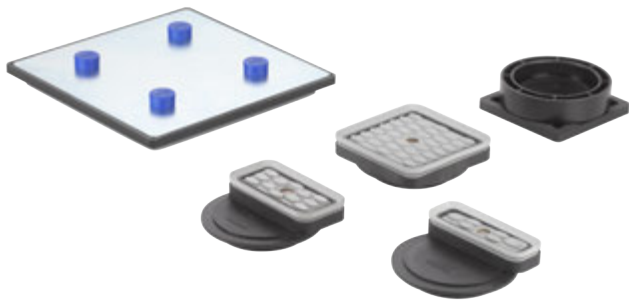


Design Data Vacuum block VCBL-R

Type	B [mm]	H [mm]	H2 [mm]	L [mm]	L1 [mm]
VCBL-R 110x110x45 30x30 TV	110	45	-	110	-
VCBL-R 160x96x25 30/50 TV	80	25	12	160	160
VCBL-R 160x96x25 40x40 TV	80	25	12	160	160
VCBL-R 160x96x45 30/50 TV	96	45	22	160	160
VCBL-R 160x96x45 40x40 TV	80	45	22	160	160
VCBL-R 160x96x125 30/50 TV	96	125	102	160	160
VCBL-R 160x160x25 30/50 TV	160	25	-	160	-
VCBL-R 160x160x25 40x40 TV	160	25	-	160	-
VCBL-R 160x160x45 30x30 TV	160	45	-	160	-
VCBL-R 160x160x45 30/50 TV	160	45	-	160	-
VCBL-R 160x160x45 40x40 TV	160	45	-	160	-
VCBL-R 160x160x125 30x30 TV	160	125	-	160	-

Adapter-Plates ISAP-R

Standard dimensions (LxW) 175 x 175 mm



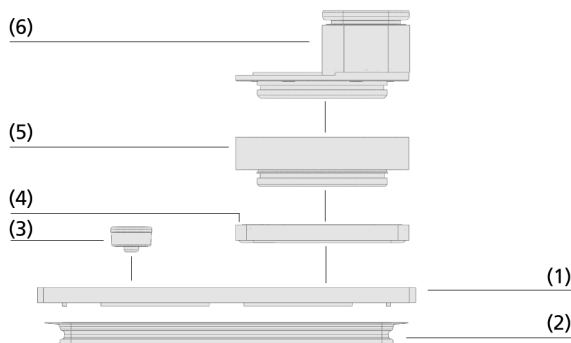
Adapter-Plates ISAP-R

Suitability for Industry Specific Applications

Applications

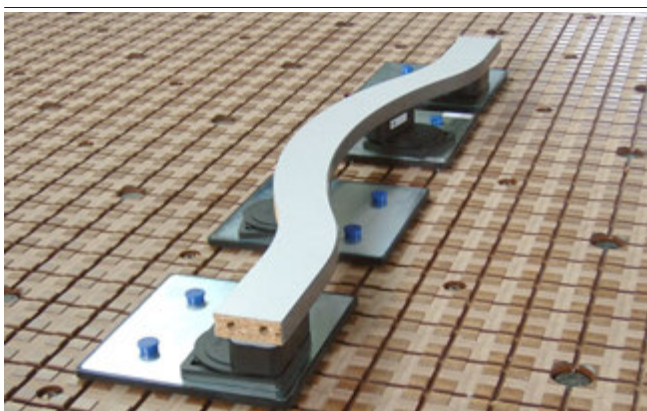
- Vacuum clamping system for CNC machining centers with grid tables
- The Adapter-Plates are inserted directly into the grid on the machine table and are suitable for mixed use with standard vacuum blocks
- The Adapter-Plates can be flexibly equipped with up to additional four Mono-Bases ISMB and suction cups ISCUP
- Particularly suitable for narrow and bent workpieces with small suction surfaces and delicate molds
- Overall height can be adapted with the spacer rings
- Suitable for all common grid geometries (slot width 5 mm to 7 mm, slot depth 5 mm to 7 mm)

Design



System Design Adapter-Plates ISAP-R

- Adapter-Plate (1) base plate
- Sealing frame (2) for sealing off the vacuum in the grid
- Mono-Base (4) for positioning using the Adapter-Plate vacuum opening and suction cup (6) for fixing the workpiece are available as accessories
- Spacer ring (5) for adjusting the height to the machining height of the machine
- Sealing magnet (3)



Adapter-Plates ISAP-R with Mono-Base and suction cups for clamping curved workpieces

Our Highlights...

- Modular system can be enhanced with various suction area sizes
- Freely position suction cups and Mono-Bases on the Adapter-Plate
- Mixed operation with standard suction blocks possible
- Versatile accessories and spare parts can be interchanged without tools

Your Benefits...

- Ideal for clamping narrow or curved workpieces
- Practically every clamping layout can be achieved
- Maximum level of flexibility and shortened set-up times
- Quick, simple and cost-effective replacement of accessories and spare parts

Adapter-Plates ISAP-R

Standard dimensions (LxW) 175 x 175 mm



Designation Code Adapter-Plates ISAP-R

ISAP-R	-	175x175x7	-	30/50
1		2		3

1 – Abbreviated designation

Code	Type
ISAP-R	Innospann adapter plate, grid table system

2 – Dimensions

Code	LxWxH in mm
175x175x7	175x175x7

3 – Grid dimensions

Code	Grid dimension in mm
30/50	30x30 and 50x50

The adapter plate ISAP-R is delivered assembled. The product consists of:

- Base plate made of steel
- Magnetic plugs for closing the vacuum openings

Available spare parts: Sealing magnet

Available accessories: Mono-Base, Cup



Ordering Data Adapter-Plates ISAP-R

Type	Part no.
ISAP-R 175x175x7 30/50	10.01.15.00184






Ordering Data Spare Parts Adapter-Plates ISAP-R

Type	Part no.
Sealing magnet	ISMST 19-7 4ISMST 10.01.14.00847



Ordering Data Accessories Adapter-Plates ISAP-R

Type	Part no.
Mono-Base	ISMb 80x80x8 10.01.15.00188 

Type	Part no.
Cup	ISCUP Cup 1 80x80x30 10.01.15.00003 
Cup	ISCUP Cup 2 80x40x30 10.01.15.00004 
Cup	ISCUP Cup 3 80x28x30 10.01.15.00005 

Adapter-Plates ISAP-R

Standard dimensions (LxW) 175 x 175 mm

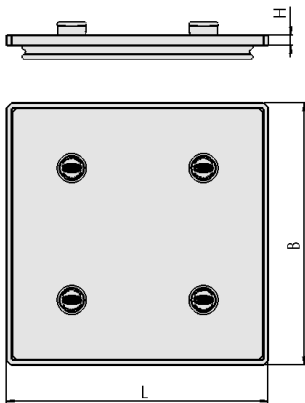


Technical Data Adapter-Plates ISAP-R

Type	Recommended slot width x slot depth [mm]
ISAP-R 175x175x7 30/50	5x5 / 7x7



Design Data Adapter-Plates ISAP-R



ISAP-R

Type	B [mm]	H [mm]	L [mm]
ISAP-R 175x175x7 30/50	175	7	175

Adapter-Plates AP-R

Standard dimensions 130 × 130 mm and 160 × 160 mm



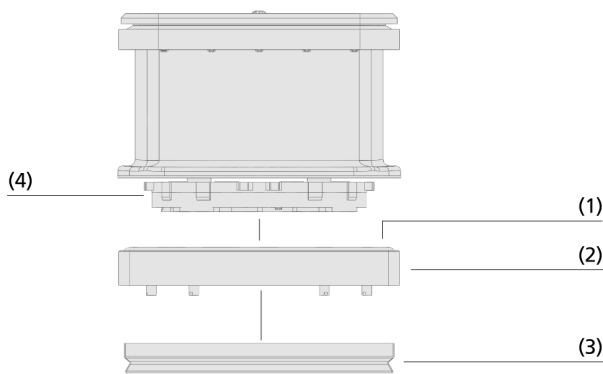
Suitability for Industry Specific Applications



Applications

- Specially developed Adapter-Plate for using vacuum blocks VCBL-B on grid tables
- The Adapter-Plate is placed directly on the grid of the nesting machine table
- Vacuum blocks VCBL-B can be placed into the suction cup mount of the Adapter-Plate at any orientation in 15° steps to align the suction area as desired
- The vacuum blocks are available in three different heights (29, 48 and 74 mm) and four different suction areas as an accessory

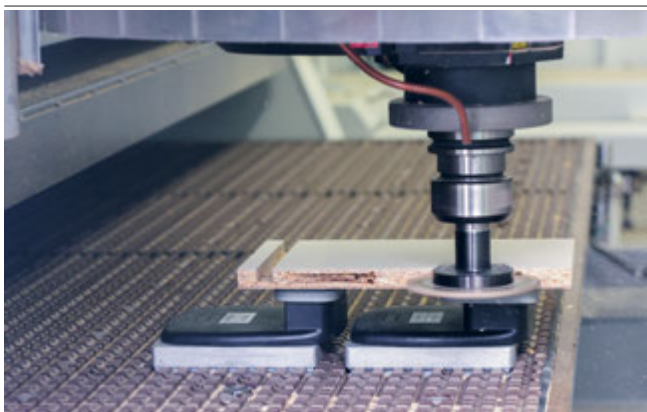
Adapter-Plates AP-R



Design

- Sealing ring (1) for sealing against the bottom surface of suction cup
- Sturdy main body made of aluminum (2)
- Sealing frame (3) available for various table grids
- Suction cup mount matches vacuum blocks VCBL-B (4) which are available as accessories

System Design Adapter-Plates AP-R



Adapter-Plates AP-R with suction block VCBL-B when clamping a wooden particle board

Our Highlights...

- Modular system of Adapter-Plate and suction cups
- Suction cups available in various overall heights
- Series-produced touch valve in the vacuum blocks VCBL-B

Your Benefits...

- Maximum flexibility in positioning of the suction cups
- Multiple working heights available all the way up to five-axis machining
- Unused suction cups can remain on the machine table

Adapter-Plates AP-R

Standard dimensions 130 × 130 mm and 160 × 160 mm



Designation Code Adapter-Plates AP-R

AP-R	-	130x130x16	-	30/40
1		2		3

1 – Abbreviated designation

Code	Type
AP-R	Adapter-Plate, grid table system

2 – Dimensions

Code	LxWxH in mm
130x130x16...	130x130x16 to 160x160x16

3 – Grid dimensions

Code	Grid dimension in mm
30/40	30x30 to 40x40
50x50	50x50

The adapter plate AP-R is delivered assembled. The product consists of:

- Base body made of aluminium
- Bottom sealing frame

Available spare parts: Sealing frame

Available accessories: Vacuum blocks



Ordering Data Adapter-Plates AP-R

Type	Part no.
AP-R-130x130x16-30/40	10.01.15.00279
AP-R-160x160x16-50x50	10.01.15.00296



Ordering Data Spare Parts Adapter-Plates AP-R

Type	Spare Parts	Part no.
AP-R-130x130x16-30/40	Sealing frame	ISDR 120x120x13.5 R 30/40 10.01.15.00353
AP-R-160x160x16-50x50	Sealing frame	ISDR 150x150x13.5 R 30/50 10.01.15.00352



Ordering Data Accessories Adapter-Plates AP-R

Type	Part no.
Vacuum block	VCBL-B 120x50x29 TV 10.01.12.03167
Vacuum block	VCBL-B 125x75x29 TV 10.01.12.03166
Vacuum block	VCBL-B 130x30x29 TV 10.01.12.03168
Vacuum block	VCBL-B 140x130x29 TV 10.01.12.03165
Vacuum block	VCBL-B 120x50x48 TV 10.01.12.03171
Vacuum block	VCBL-B 125x75x48 TV 10.01.12.03170
Vacuum block	VCBL-B 130x30x48 TV 10.01.12.03172
Vacuum block	VCBL-B 140x130x48 TV 10.01.12.03169
Vacuum block	VCBL-B 120x50x74 TV 10.01.12.03175
Vacuum block	VCBL-B 125x75x74 TV 10.01.12.03174
Vacuum block	VCBL-B 130x30x74 TV 10.01.12.03176
Vacuum block	VCBL-B 140x130x74 TV 10.01.12.03173

Adapter-Plates AP-R

Standard dimensions 130 × 130 mm and 160 × 160 mm

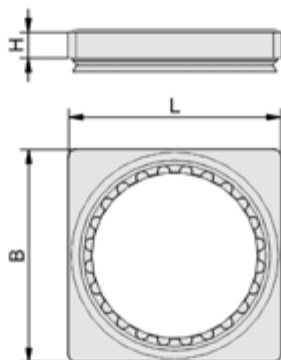


Technical Data Adapter-Plates AP-R

Type	Recommended slot width x slot depth [mm]
AP-R-130x130x16-30/40	5x5 / 7x7
AP-R-160x160x16-50x50	5x5 / 7x7



Design Data Adapter-Plates AP-R



AP-R

Type	B [mm]	H [mm]	L [mm]
AP-R-130x130x16-30/40	130	16	130
AP-R-160x160x16-50x50	160	16	160

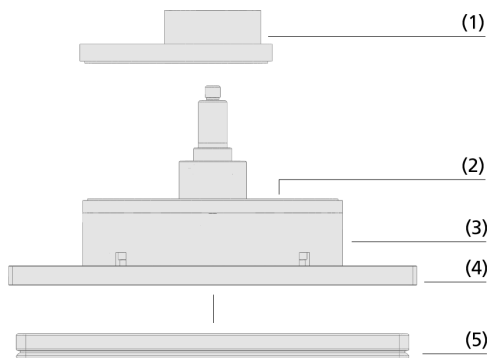
Clamping Equipment for Grid Table Systems
Mechanical Clamps VCMC-R



Clamping range 10 mm to 100 mm



Mechanical Clamps VCMC-R



System Design Mechanical Clamps VCMC-R



Mechanical Clamps VCMC-R for clamping of curved workpieces

Suitability for Industry Specific Applications

Applications

- Mechanical clamping system for CNC machining centers with grid table
- Suitable for all common grid geometries (groove widths 6.1 mm to 7 mm, groove depths 6.1 mm to 7 mm)
- The mechanical clamps are actuated via vacuum so that no further medium is required at the machine for clamping
- Particularly well suited for narrow and curved workpieces such as frame parts and window profiles
- If the clamping surface is insufficient, they can be securely clamped mechanically during machining

Design

- Eccentric clamping disc (1) is pulled downwards by the operating vacuum of the machine via a piston in the clamp
- Friction material (2) for optimizing the lateral force absorption
- Main body made of aluminum (3)
- Interface (4) to grid table with sealing frame (5)

Our Highlights...

- Eccentrically positioned clamping discs
- Clamping forces of up to 700 N
- Actuated via the operating vacuum of the CNC machining center
- Special friction materials on clamping disc and clamping surface

Your Benefits...

- Optimum use of the available clamping surface
- Maximum holding force even with narrow workpieces
- No additional medium required at the machine
- Extra resistance to lateral forces

Mechanical Clamps VCMC-R

Clamping range 10 mm to 100 mm



Designation Code Mechanical Clamps VCMC-R

VCMC-R	-	120x120x45	-	12-80	-	30x30
1		2		3		4

1 – Abbreviated designation

Code	Type
VCMC-R	Mechanical clamp, grid table system

2 – Dimensions

Code	LxWxH in mm
120x120x45...	120x120x45 to
212x212x45	212x212x45

3 – Clamping range

Code	Clamping range in mm
12-80...	12-80 to 10-100
10-100	

4 – Grid dimensions

Code	Grid dimension in mm
30x30	30x30
30/40	30x30 to 40x40
30/50	30x30 to 50x50
40x40	40x40

The mechanical clamp VCMC-R is delivered assembled. The product consists of:

- Clamping disc
- Main body made of aluminium
- Bottom sealing frame

Available spare parts: Clamping disc, sealing frame, sealing profile



Ordering Data Mechanical Clamps VCMC-R

Type	Part no.
VCMC-R 120x120x45 12-80 30x30	10.01.12.02942
VCMC-R 130x130x100 10-100 30/40	10.01.12.02705
VCMC-R 175x175x45 12-80 30/50	10.01.15.00244
VCMC-R 212x212x45 12-80 40x40	10.01.12.01720



Ordering Data Spare Parts Mechanical Clamps VCMC-R

Type	Spare Parts	SPAN-TELL 100x27.5 EXZ 12-80 VCMC	SPAN-TELL 110x14 EX VCMC	SPAN-TELL 110x25.5 EX VCMC	SPAN-TELL 110x40.5 EX VCMC
VCMC-R 120x120x45 12-80 30x30	Clamping disc	10.01.12.01783	-	-	-
VCMC-R 130x130x100 10-100 30/40	Clamping disc	-	10.01.12.01980	10.01.12.01930	10.01.12.01936
VCMC-R 175x175x45 12-80 30/50	Clamping disc	10.01.12.01783	-	-	-
VCMC-R 212x212x45 12-80 40x40	Clamping disc	10.01.12.01783	-	-	-

Type	Spare Parts	Part no.
VCMC-R 120x120x45 12-80 30x30	Sealing frame	ISDR 120x120x13.5 R 30/40 10.01.15.00353
VCMC-R 130x130x100 10-100 30/40	Sealing frame	ISDR 120x120x13.5 R 30/40 10.01.15.00353
VCMC-R 175x175x45 12-80 30/50	Sealing frame	ISDR 167x167x9.3 NBR-55 10.01.15.00182
VCMC-R 212x212x45 12-80 40x40	Sealing profile	DI-PROF 4x13 NBR-60 10.07.04.00065



Mechanical Clamps VCMC-R

Clamping range 10 mm to 100 mm

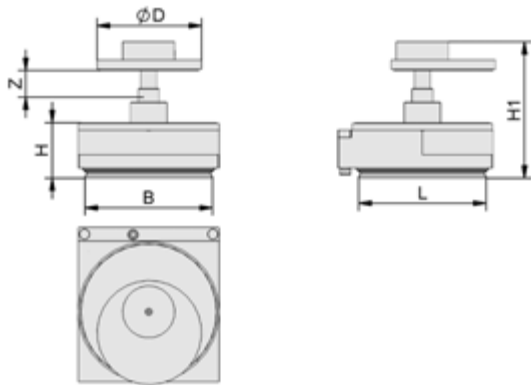


Technical Data Mechanical Clamps VCMC-R

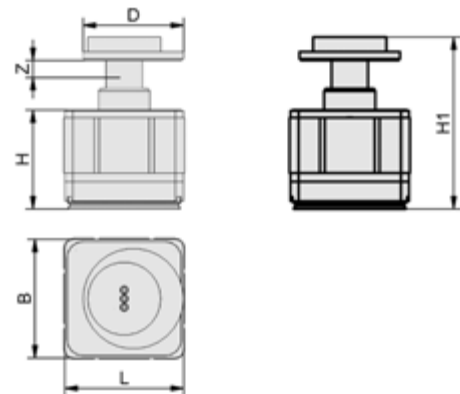
Type	Recommended slot width x slot depth [mm]	Clamping range [mm]
VCMC-R 120x120x45 12-80 30x30	6,4 x 6,1	12 ... 80
VCMC-R 130x130x100 10-100 30/40	5x5 / 7x7	10 ... 100
VCMC-R 175x175x45 12-80 30/50	5x5 / 7x7	12 ... 80
VCMC-R 212x212x45 12-80 40x40	6,4 x 6,1	12 ... 80



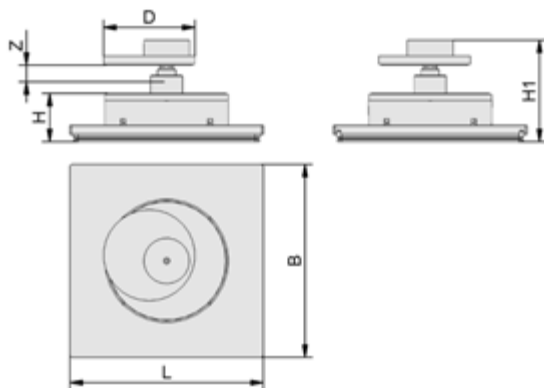
Design Data Mechanical Clamps VCMC-R



VCMC-R 120x120



VCMC-R 130x30



VCMC-R 175x175 - VCMC-R 212x212

Type	B [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	Z (Stroke) [mm]
VCMC-R 120x120x45 12-80 30x30	135	100	45	92	154	10
VCMC-R 130x130x100 10-100 30/40	130	110	100	188	130	40
VCMC-R 175x175x45 12-80 30/50	175	100	45	125	175	10
VCMC-R 212x212x45 12-80 40x40	212	100	45	90	212	10



Vacuum Blocks VCBL-G-K1



Height 30 mm



Suitability for Industry Specific Applications

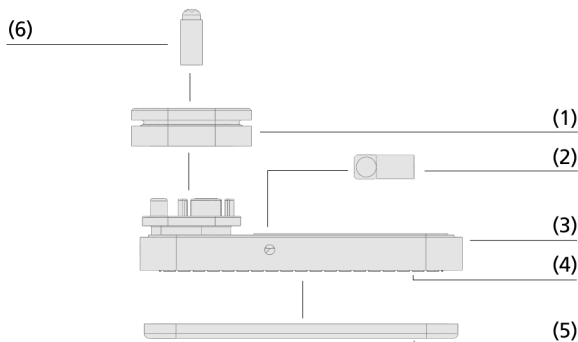


Vacuum Blocks VCBL-G-K1

Applications

- Vacuum blocks for use directly on the MDF wear plate of a nesting machine table
- The vacuum blocks are supplied with vacuum via hoses that are connected to the template connection of the machine
- The low working height of 30 mm makes it ideal for 3-axis machining centers with low Z-values
- All vacuum blocks are equipped with a touch valve for activating the vacuum only after contacting the workpiece to preserve the workpiece surface

Design



- Upper suction plate (1) for fixing the workpiece
- Hose connection (2) with M5 internal thread for connection to the template connection of the CNC machine
- Robust main body made of aluminum (3)
- Special friction pad on the bottom (4)
- Replaceable foam rubber seal (5) for applying suction to the MDF sheet
- Touch valve (6) made of soft plastic

System Design Vacuum Blocks VCBL-G-K1



Vacuum Blocks VCBL-G-K1 for clamping MDF workpieces

Our Highlights...

- Vacuum block with hose connection
- Replaceable suction plates on all vacuum blocks
- Special friction pad on the underside (milled to size)
- Responsive plastic touch valve with soft surface

Your Benefits...

- Simple connection to the vacuum supply of the machine
- Simple replacement of worn parts
- High holding force on smooth surfaces
- Non-damaging fixing of the workpiece

Vacuum Blocks VCBL-G-K1

Height 30 mm



Designation Code Vacuum Blocks VCBL-G-K1

VCBL-G-K1	–	120x50	–	x30
1		2		3

1 – Abbreviated designation

Code	Type
VCBL-G-K1	Vacuum blocks for nesting tables, 1-circuit system

2 – Suction area

Code	LxW in mm
120x50...	120x50 and 140x115
140x115	

3 – Height

Code	Height in mm
x30	30

The vacuum block VCBL-G-K1 is delivered assembled. The product consists of:

- Suction plate with the dimensions 140x115 mm or 120x50 mm
- Main body made of plastic
- Friction plate bottom
- Plug union, elbow Type STV

Available spare parts: Suction plate, touch valve, plug union



Ordering Data Vacuum Blocks VCBL-G-K1

Type	Part no.
VCBL-G-K1 120x50x30	10.01.12.03776 
VCBL-G-K1 140x115x30	10.01.12.03766 



Ordering Data Spare Parts Vacuum Blocks VCBL-G-K1

Type	Spare Parts	Part no.
VCBL-G-K1 120x50x30	Suction plate (top)	VCSP-O 120x50x15.5
VCBL-G-K1 140x115x30	Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K1

Type	Spare Parts	Part no.
VCBL-G-K1 120x50x30	Touch Valve	TV D9 4.3
VCBL-G-K1 140x115x30	Touch Valve	TV D9 4.3

Type	Spare Parts	STV-W M5-AG 6	STV-W M5-AG 4
VCBL-G-K1	Plug union	10.08.02.00235	10.08.02.00155



Technical Data Vacuum Blocks VCBL-G-K1

Type	Hose type construction
VCBL-G-K1 120x50x30	Hose D = 6 d = 4
VCBL-G-K1 140x115x30	Hose D = 6 d = 4

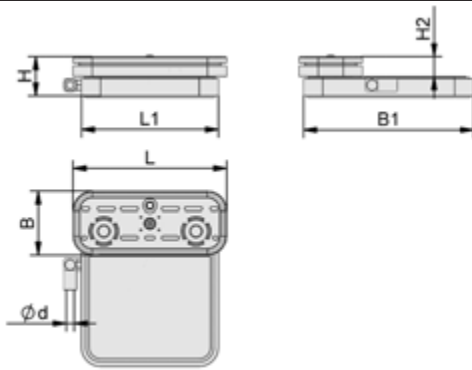
Vacuum Blocks VCBL-G-K1



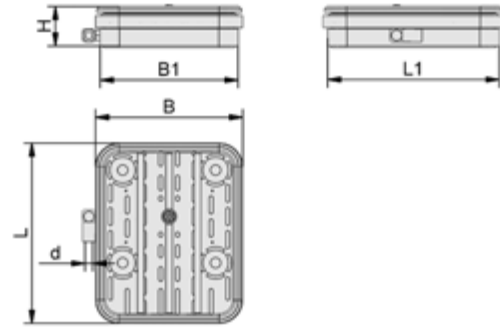
Height 30 mm



Design Data Vacuum Blocks VCBL-G-K1



VCBL-G-K1 120x50



VCBL-G-K1 140x115

Type	B [mm]	B1 [mm]	d [mm]	H [mm]	H2 [mm]	L [mm]	L1 [mm]
VCBL-G-K1 120x50x30	50	133	6	30	14	120	107
VCBL-G-K1 140x115x30	114	107	6	30	-	140	133

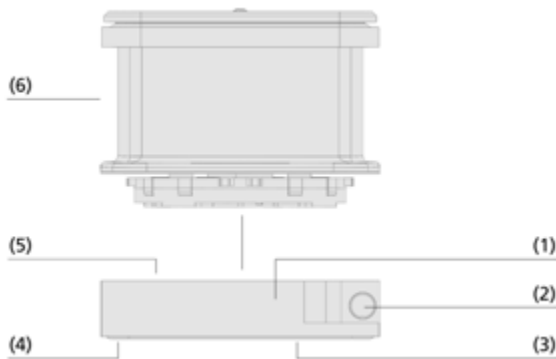


Adapter-Plates AP-G

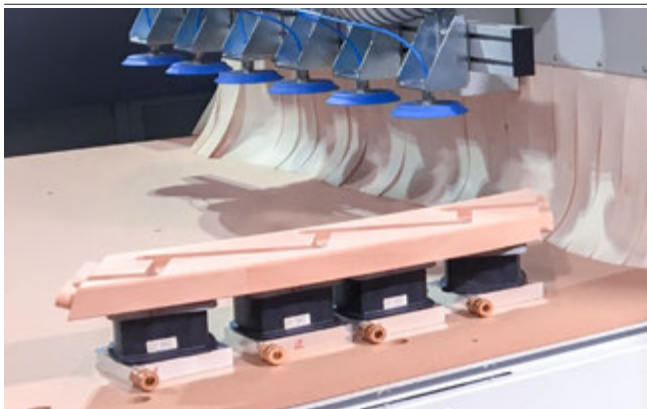
Standard dimensions 130 x 130 mm



Adapter-Plates AP-G



System Design Adapter-Plates AP-G



Adapter-Plates AP-G with Vacuum Block VCBL-B when clamping a wooden workpiece

Suitability for Industry Specific Applications

Applications

- Adapter-Plate for using vacuum blocks VCBL-B on nesting machine tables
- The Adapter-Plate is supplied with vacuum via a hose that is connected to the template connection of the machine
- Vacuum blocks VCBL-B are placed into the suction cup mount of the Adapter-Plate at any orientation in 15° steps to orient the suction area as desired
- The vacuum blocks are available in three different heights (29, 48 and 74 mm) and four different suction areas

Design

- Robust main body made of aluminum (1)
- Push button (2) for manual blow-off of the Adapter-Plate during positioning
- Special friction pad on the bottom (3)
- Replaceable foam rubber seal (4) for applying suction to the MDF sheet
- Suction cup mount (5) matches vacuum blocks VCBL-B
- Vacuum blocks VCBL-B (6) are available as accessories

Our Highlights...

- Modular system of Adapter-Plate and suction cups
- Suction cups available in various overall heights
- Special friction pad on the underside (milled to size)
- Push button for manual blow-off of the Adapter-Plate
- Vacuum blocks VCBL-B with touch valve

Your Benefits...

- Maximum flexibility and set-up time reduction
- Multiple working heights available all the way up to five-axis machining
- High holding force on smooth surfaces
- Quick positioning of the Adapter-Plate without turning off the vacuum
- Unused vacuum blocks can remain on the machine table

Adapter-Plates AP-G

Standard dimensions 130 × 130 mm



Designation Code Adapter-Plate AP-G

AP-G	–	130x130x26
1		2

1 – Abbreviated designation

Code	Type
AP-G	Adapter-Plate for nesting tables, flat table systems

2 – Dimensions

Code	LxWxH in mm
130x130x26	130x130x26

The adapter plate AP-G is delivered assembled. The product consists of:

- Main body made of aluminum
- Friction plate bottom

Available accessories: Vacuum block, screw in push fitting (plug union), sealing screw with collar



Ordering Data Adapter-Plate AP-G

Type	Part no.
AP-G-130x130x26	10.01.12.03876 



Ordering Data Accessories Adapter-Plate AP-G

Type		Part no.
Vacuum block	VCBL-B 120x50x29 TV	10.01.12.03167
Vacuum block	VCBL-B 125x75x29 TV	10.01.12.03166
Vacuum block	VCBL-B 130x30x29 TV	10.01.12.03168
Vacuum block	VCBL-B 140x130x29 TV	10.01.12.03165
Vacuum block	VCBL-B 120x50x48 TV	10.01.12.03171
Vacuum block	VCBL-B 125x75x48 TV	10.01.12.03170
Vacuum block	VCBL-B 130x30x48 TV	10.01.12.03172
Vacuum block	VCBL-B 140x130x48 TV	10.01.12.03169
Vacuum block	VCBL-B 120x50x74 TV	10.01.12.03175
Vacuum block	VCBL-B 125x75x74 TV	10.01.12.03174
Vacuum block	VCBL-B 130x30x74 TV	10.01.12.03176
Vacuum block	VCBL-B 140x130x74 TV	10.01.12.03173

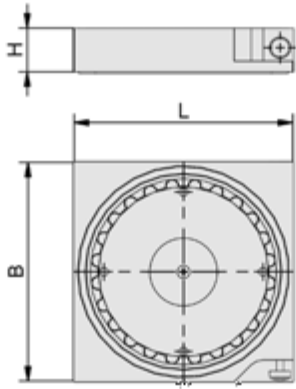
Type		Part no.
Plug union, elbow	STV-W G1/4-AG 4	10.08.02.00157
Plug union, elbow	STV-W G1/4-AG 6	10.08.02.00159
Plug union, elbow	STV-W G1/4-AG 8	10.08.02.00161
Plug union, elbow	STV-W G1/4-AG 12	10.08.02.00162
Plug union, straight	STV-GE G1/4-AG 10	10.08.02.00251
Sealing screw with collar	VRS-SB G1/4-AG ISKT O-Ring	10.08.06.00044

Adapter-Plates AP-G

Standard dimensions 130 × 130 mm



Design Data Adapter-Plate AP-G



AP-G

Type	B [mm]	H [mm]	L [mm]
AP-G-130x130x26	130	26	130

Flexibilization of CNC Machining Centers



Overview of Section

At a Glance

Selection Aid

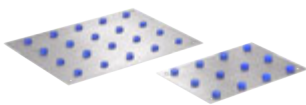
Page



Retrofitting the Machine Table Retrofitting Examples

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Innospann Systems for Wood Processing



Innospann Steel-Plate ISST

- Steel-Plate with vacuum openings
- For flexible positioning of clamping Equipment from the Innospann modular system



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Innospann Steel-Plate for flexible retooling of all machines with smooth, grid and console tables to a hose-free vacuum system.



Innospann Clamping Equipment IS-CUP / IS-MB / IS-QB

- Suitable for ISST, ISAP as well as flat and grid tables
- Consisting of suction cup and suction block mounting



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Modular clamping system for use on Steel-Plate ISST and Adapter-Plates ISAP or directly on smooth and grid tables.



Accessories and Spare Parts

- Suction cups, friction plates, sealing gaskets
- Spacer rings, stops and magnets



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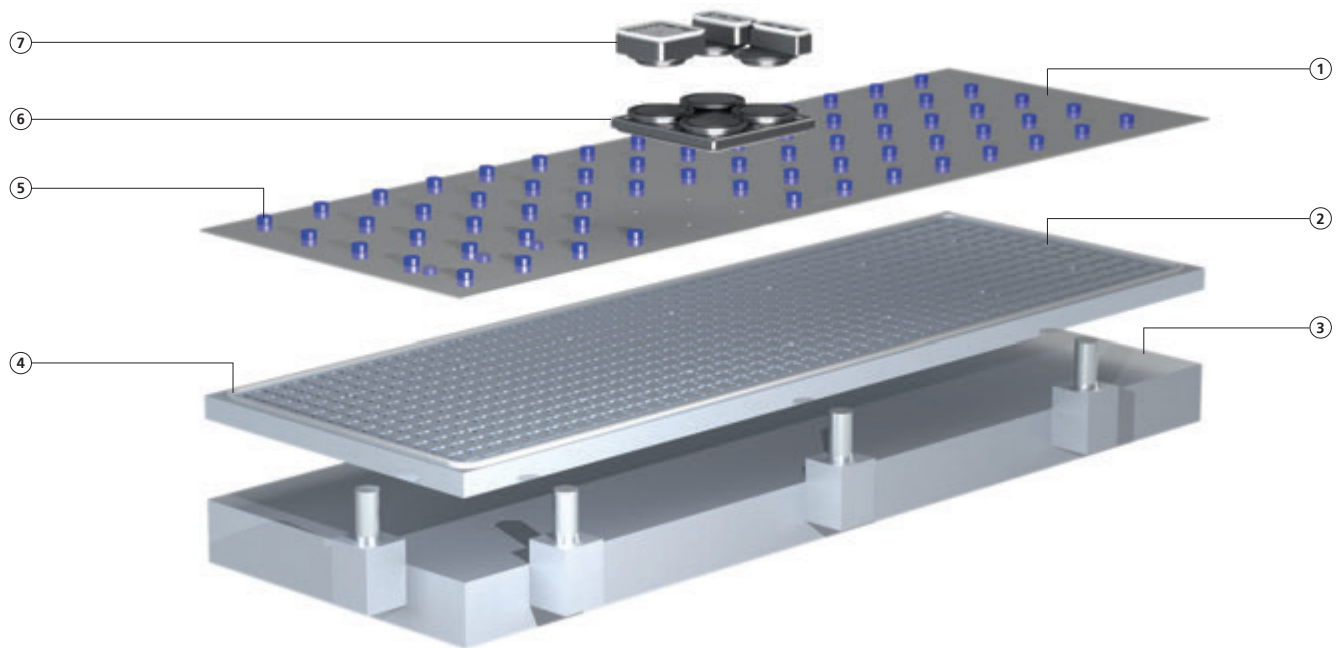
Used in combination with the Schmalz Innospann systems.

Design of Innospann Systems

At a Glance

Retrofitting the Machine Table

The machine table is refitted by installing a steel sheet (Steel-Plate) on a grid plate. For grid tables, you can use the existing grids. Flat and console tables require an intermediate plate with a grid. Optionally, you can also mill a grid directly into a flat table. The integrated vacuum line eliminates the hosing. The vacuum blocks can be positioned on the Steel-Plate in any location.



① Innospann Steel-Plate (ISST)

- Made from high-quality stainless steel or galvanized steel
- Integrated vacuum openings
- Laser grid provides orientation during positioning

② ③ Grid table or grid plate

- For flat or console tables, the customer must mount a grid plate on the table

④ Sealing gasket

⑤ Magnetic plug

⑥ Suction block mountings

- Mono-Base for one suction cup
- Quad-Base for up to four suction cups

⑦ Suction Cups

- Suction cups in various shapes
- Mechanical clamps

Retrofitting Examples



Innospann Steel-Plate mounted on a console table



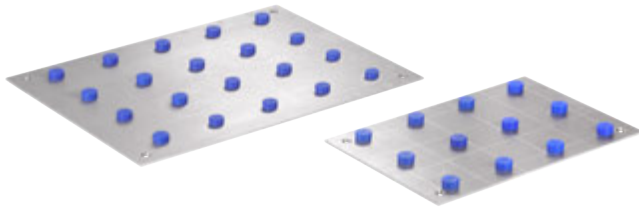
Innospann Steel-Plate mounted on a flat table



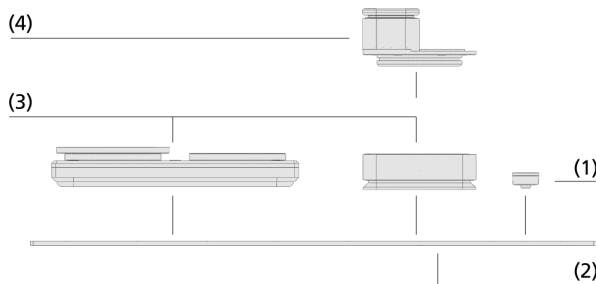
Innospann Steel-Plate mounted on a grid table

Innospann Steel-Plate ISST

Hole grid measure 75 mm and 150 mm



Innospann Steel-Plate ISST



System Design Innospann Steel-Plate ISST



Innospann Steel-Plate with Mono-Base and suction cups

Suitability for Industry Specific Applications

Applications

- Vacuum clamping system for retrofitting CNC machining centers with flat, grid or console tables
- Facilitates efficient and flexible single piece and small series production especially for the manufacture of furniture
- The suction cup mountings Mono-Base and Quad-Base are fitted with suction cups and can be positioned freely on the Steel-Plate
- A laser grid provides orientation assistance
- Unused vacuum openings can be closed manually using sealing magnets
- Variable total height through various suction cup heights and optional spacer rings

Design

- Unused vacuum openings can be closed off with sealing magnets (1)
- Innospann Steel-Plate (2) made from high-quality stainless or galvanized steel with integrated vacuum openings
- Suction cup mountings (3): Mono-Base or Quad-Base
- Suction cups (4) in various shapes

Our Highlights...

- Use on flat, grid and console tables
- Two different valve intervals available
- Laser etched grid markings
- Sealing magnets for uncovered vacuum openings

Your Benefits...

- Can be retrofitted on all standard machine types
- Enables free positioning of Mono-Bases and Quad-Bases
- Orientation assistance for suction cup positioning
- High level of flexibility and shortened set-up times

Innospann Steel-Plate ISST

Hole grid measure 75 mm and 150 mm



Designation Code Innospann Steel-Plate ISST

ISST	-	MS	-	variabel	-	75
1		2		3		4

1 – Abbreviated designation

Code	Type
ISST	Innospann Steel-Plate

2 – Version

Code	Type
MS	Sealing magnet
TVR	Touch ball valve

3 – Dimensions

Code	LxWxH in mm
variabel	Variable

4 – Valve spacing

Code	Valve spacing in mm
75...150	75 and 150

The Steel-Plate ISST is delivered assembled. The product consists of:

- Stainless steel plate or galvanized steel made to measure with hole pattern and laser grid

Available accessories: Sealing magnets



Ordering Data Innospann Steel-Plate ISST

Type	Dimensions LxW [mm]	Valve spacing [mm]	Part no.
ISST-MS for Mono-Base	Variable	Approx. 75	On request
ISST-TVV for Mono-Base	Variable	Approx. 75	On request
ISST-MS for Quad-Base	Variable	Approx. 150	On request
ISST-TVV for Quad-Base	Variable	Approx. 150	On request



Ordering Data Accessories Innospann Steel-Plate ISST

Type	Part no.
Sealing magnet	ISMST 19-7 4ISMST 10.01.14.00847

Innospann Cup, Mono-Base and Quad-Base



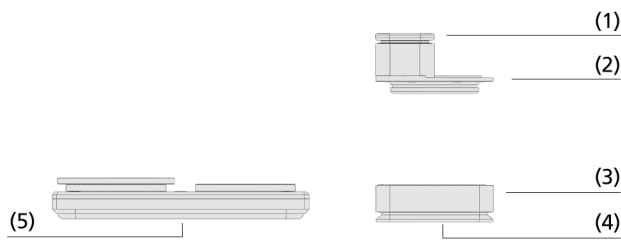
Innospann Clamping Equipment IS Cup / ISMB / ISQB

Suitability for Industry Specific Applications

Applications

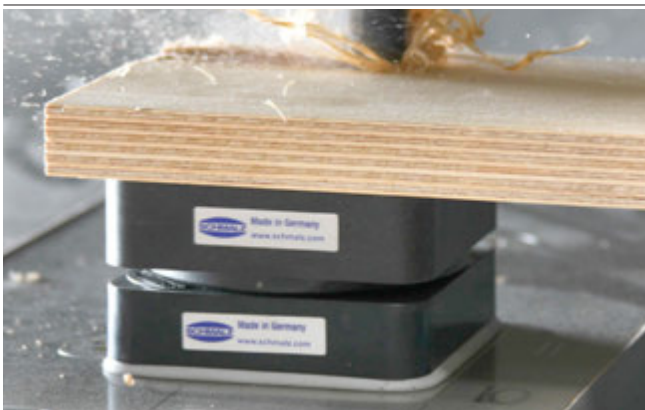
- The suction cup mounts Mono-Base ISMB and Quad-Base ISQB are positioned on the Steel-Plate ISST or the Innospann Adapter-Plate ISAP
- Alternatively, the mounts ISQB or ISMB are available for direct adaptation to flat or grid tables
- The suction cups IS Cup are connected to the base and are continuously rotatable in the base
- The cups are available in three sizes to ensure maximum flexibility
- Variable total height through various suction cup heights and optional spacer rings

Design



- Sealing frame (1) for fixing the workpieces
- Robust main body (2) of the suction cups with suction surfaces in three different sizes and pluggable Innospann connector
- Suction cup mounting Mono-Base (3) for mounting and using individual cups
- Sealing frame or foam rubber sealing profile (4) downwards to machine table or steel plate
- Suction cup holder Quad-Base (5) for mounting up to four suction cups

System Design Innospann Clamping Equipment IS Cup / ISMB / ISQB



Innospann Cup and Mono-Base while clamping a wooden workpiece

Our Highlights...

- Bases / suction cups freely positionable on the Steel-Plate, Adapter-Plate, or grid or flat table
- Modular system simplifies replacement of single components such as suction cups, sealing frame, and friction pads
- Selection of various spacer rings available

Your Benefits...

- High level of flexibility and shortened set-up times
- Quick availability of wear parts and minimized costs
- Adjustment to any working height of the machine possible

Innospann Clamping Equipment ISCUP / ISMB / ISQB

Innospann Cup, Mono-Base and Quad-Base



Designation Code Innospann Clamping Equipment ISCUP / ISMB / ISQB

Module 1: Suction Cup

ISCUP	-	Cup 1	-	80x80	-	x30	-	TV
1		2		3		4		5

1 – Abbreviated designation

Code	Type
ISCUP	Top part of the suction cups for ISMB and ISQB

2 – Version

Code	Type
CUP 1...4	Suction cup 1 to 4

3 – Suction area

Code	LxW in mm
80x28...	80x28 to 100x100
100x100	

4 – Height

Code	Height in mm
x16...x30	16 to 30

5 – Product addition

Code	Type
TV	With touch valve

Module 2: Base

ISMB	-	T	-	80x80x42	-	50x50
1		2		3		4

1 – Abbreviated designation

Code	Type
ISMB	Mono-Base for Steel-Plate and Adapter-Plate

2 – Version

Code	Type
-	Steel-Plate-MS
G	Flat table
R	Grid table
T	Steel-Plate-TVR

3 – Dimensions

Code	LxWxH in mm
80x80x8...	80x80x8 to 110x110x15
110x110x15	

4 – Grid dimensions

Code	Grid dimension in mm
15 x15...	15x15 to 50x50
50x50	

ISQB	-	R	-	175x175x15	-	30/50
1		2		3		4

1 – Abbreviated designation

Code	Type
ISQB	Quad-Base for Steel-Plate

2 – Version

Code	Type
-	Steel-Plate-MS
G	Flat table
R	Grid table
T	Steel-Plate-TVR

3 – Dimensions

Code	LxWxH in mm
175x175x22	175x175x22
175x175x22	175x175x22
175x175x15	175x175x15
175x175x22	175x175x22

4 – Grid dimensions

Code	Grid dimension in mm
30/50	30x30 and 50x50

The Innospann modular system can be constructed from three basic modules:

- Innospann Mono-Base ISMB or Innospann Quad-Base ISQB
- Innospann Suction Cup ISCUP

The different versions of the articles can be freely combined and extended. Cup, base and intermediate rings are delivered separately.

Available spare parts: See Innospann accessories and spare parts



Innospann Cup, Mono-Base and Quad-Base



Ordering Data Innospann Clamping Equipment ISCUP / ISMB / ISQB

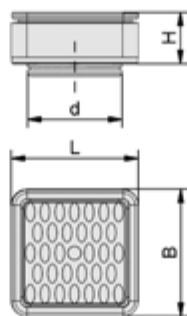
Type		Part no.
Cup	ISCUP Cup 1 80x80x16	10.01.15.00209
Cup	ISCUP Cup 2 80x40x16	10.01.15.00210
Cup	ISCUP Cup 3 80x28x16	10.01.15.00211
Cup	ISCUP Cup 1 80x80x30	10.01.15.00003
Cup	ISCUP Cup 2 80x40x30	10.01.15.00004
Cup	ISCUP Cup 3 80x28x30	10.01.15.00005
Cup	ISCUP Cup 1 80x80x30 TV	10.01.15.00303
Cup	ISCUP Cup 2 80x40x30 TV	10.01.15.00305
Cup	ISCUP Cup 4 100x100x30	10.01.15.00403
Cup	ISCUP Cup 4 100x100x30 TV	10.01.15.00405

Type		Part no.
Mono-Base	ISMB 80x80x8	10.01.15.00188
Mono-Base	ISMB 80x80x22	10.01.15.00009
Mono-Base	ISMB 80x80x42	10.01.15.00078
Mono-Base	ISMB 80x80x67	10.01.15.00079
Mono-Base	ISMB-G 80x80x55	10.01.15.00128
Mono-Base	ISMB-G 80x80x70	10.01.15.00156
Mono-Base	ISMB-R 90x90x15 40x40	10.01.15.00380
Mono-Base	ISMB-R 96x96x15 15/30	10.01.15.00286
Mono-Base	ISMB-R 110x110x15 50x50	10.01.15.00372
Mono-Base	ISMB-T 80x80x22	10.01.15.00145
Mono-Base	ISMB-T 80x80x42	10.01.15.00154
Mono-Base	ISMB-T 80x80x67	10.01.15.00155

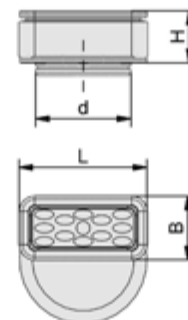
Type		Part no.
Quad-Base	ISQB 175x175x22	10.01.15.00001
Quad-Base	ISQB-G 175x175x22	10.01.15.00007
Quad-Base	ISQB-R 175x175x15 30/50	10.01.15.00183
Quad-Base	ISQB-T 175x175x22	10.01.15.00153



Design Data Innospann Clamping Equipment ISCUP / ISMB / ISQB



ISCUP Cup 1, ISCUP Cup 4



ISCUP Cup 2, ISCUP Cup 3

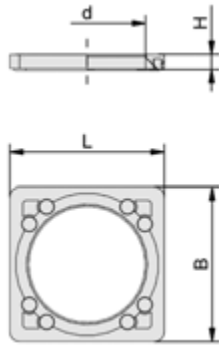


Innospann Clamping Equipment ISCUP / ISMB / ISQB

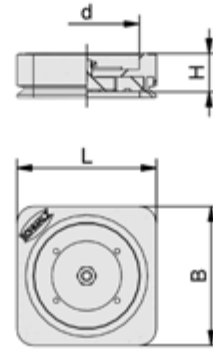
Innospann Cup, Mono-Base and Quad-Base



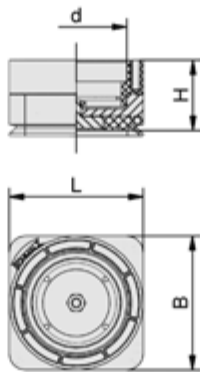
Design Data Innospann Clamping Equipment ISCUP / ISMB / ISQB



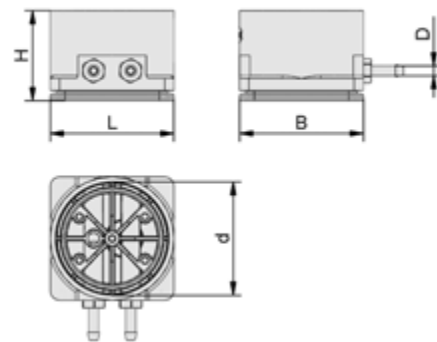
ISMB 8



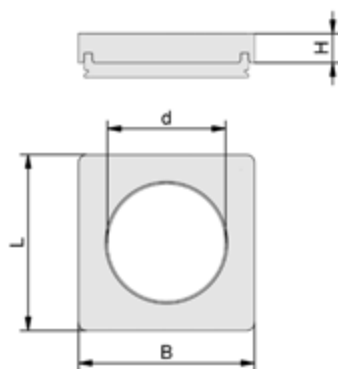
ISMB 22, ISMB-T 22



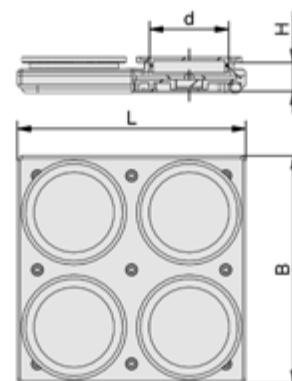
ISMB 42 - 67, ISMB-T 42 - 67



ISMB-G



ISMB-R



ISQB

Innospann Cup, Mono-Base and Quad-Base



Design Data Innospann Clamping Equipment ISCUP / ISMB / ISQB

Type	B [mm]	d [mm]	H [mm]	L [mm]
ISCUP Cup 1 80x80x16	80	60	16	80
ISCUP Cup 2 80x40x16	40	60	16	80
ISCUP Cup 3 80x28x16	28	60	16	80
ISCUP Cup 1 80x80x30	80	60	30	80
ISCUP Cup 2 80x40x30	40	60	30	80
ISCUP Cup 3 80x28x30	28	60	30	80
ISCUP Cup 1 80x80x30 TV	80	60	30	80
ISCUP Cup 2 80x40x30 TV	40	60	30	80
ISCUP Cup 4 100x100x30	100	60	30	100
ISCUP Cup 4 100x100x30 TV	100	60	30	100

Type	B [mm]	D [mm]	d [mm]	H [mm]	L [mm]
ISMB 80x80x8	80	-	60	8	80
ISMB 80x80x22	80	-	60	22	80
ISMB 80x80x42	80	-	60	42	80
ISMB 80x80x67	80	-	60	67	80
ISMB-G 80x80x55	80	6	60	55	80
ISMB-G 80x80x70	80	6	60	70	80
ISMB-R 90x90x15 40x40	90	-	60	15	90
ISMB-R 96x96x15 15/30	96	-	60	15	96
ISMB-R 110x110x15 50x50	110	-	60	15	110
ISMB-T 80x80x22	80	-	60	22	80
ISMB-T 80x80x42	80	-	60	42	80
ISMB-T 80x80x67	80	-	60	67	80

Type	B [mm]	d [mm]	H [mm]	L [mm]
ISQB 175x175x22	175	60	22	175
ISQB-G 175x175x22	175	60	22	175
ISQB-R 175x175x15 30/50	175	60	15	175
ISQB-T 175x175x22	175	60	22	175

Accessories and Spare Parts

Accessories and Spare Parts ISMST, ISRPL, ISDR, DI-PROF, ISZR-V, VCMV, SIEB, TV



Suitability for Industry Specific Applications



Accessories and Spare Parts

Applications

- Suitable accessories and spare parts for Schmalz Innospann systems
- Modular extension and adaptation of the system to workpiece geometry and working height
- Cost-effectiveness increased by working with the Innospann system
- In many cases, wear or damage to the suction cups or other parts does not require replacement of the entire suction cup
- It is often sufficient to replace single components to make the vacuum system operational again

Design

- Sealing frame and friction plates for high lateral forces and good sealing properties
- Spacer rings for various working heights
- Suction cups with foam rubber seals
- Replacement magnets for Steel-Plate vacuum openings

Our Highlights...

- Almost every single component of the vacuum system can be replaced as necessary
- Suction cups in various shapes
- Large selection of spacer rings

Your Benefits...

- Reduced costs for spare parts
- Maximum level of flexibility and shortened set-up times
- Adjustable working height permits use with almost any CNC machining center



Ordering Data Accessories and Spare Parts

Type		Part no.
Spacer ring, Innospann	ISZR-V 80x15	10.01.15.00052
Spacer ring, Innospann	ISZR-V 80x20	10.01.15.00053
Spacer ring, Innospann	ISZR-V 80x40	10.01.15.00073
Spacer ring, Innospann	ISZR-V 80x45	10.01.15.00054
Spacer ring, Innospann	ISZR-V 80x48	10.01.15.00055

Type		Part no.
Sealing frame	ISDR 81x81x12 Cup 1 NK-50	10.01.15.00020
Sealing frame	ISDR 81x43x12 Cup 2 NK-50	10.01.15.00021
Sealing frame	ISDR 81x31x12 Cup 3 NK-50	10.01.15.00022
Sealing frame	ISDR 100x100x12 Cup 4	10.01.15.00404

Accessories and Spare Parts

Accessories and Spare Parts ISMST, ISRPL, ISDR, DI-PROF, ISZR-V, VCMV, SIEB, TV



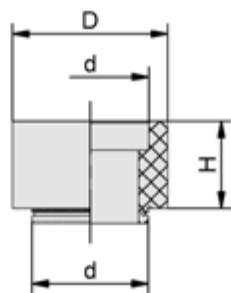
Ordering Data Accessories and Spare Parts

Type		Part no.
Friction plate	ISRPL 66x14x8.5	10.01.15.00019
Friction plate	ISRPL 66x26x8.5	10.01.15.00018
Friction plate	ISRPL 66x66x8.5	10.01.15.00017
Friction plate	ISRPL 86x86x8.7 NBR-55 d5	10.01.15.00402

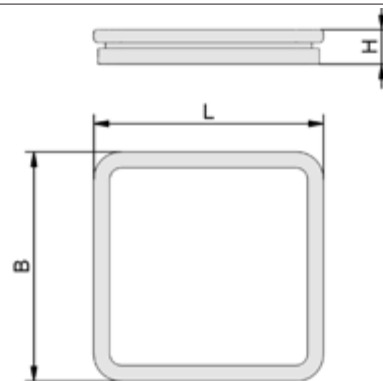
Type		Part no.
Sealing magnet	ISMST 19-7 4ISMST	10.01.14.00847
Sealing profile	DI-PROF 4x10 MOS EPDM HR	10.01.15.00062
Magnetic valve	VCMV 3 25	10.01.15.00133
Touch valve	TV D11 4.3	10.01.15.00347
Sieve, round	SIEB 11x1 MS-A2 100	10.07.01.00085



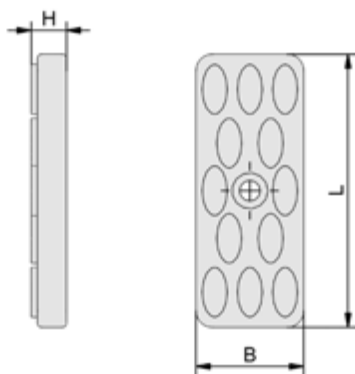
Design Data Accessories and Spare Parts



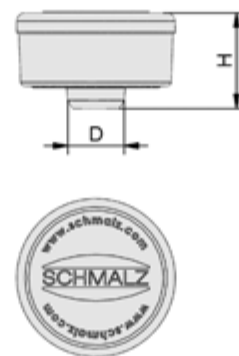
ISRPL



ISDR



ISRPL



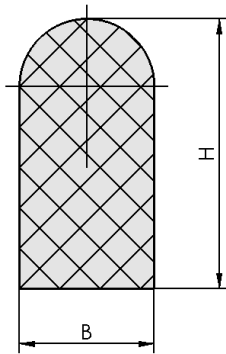
ISMST

Accessories and Spare Parts

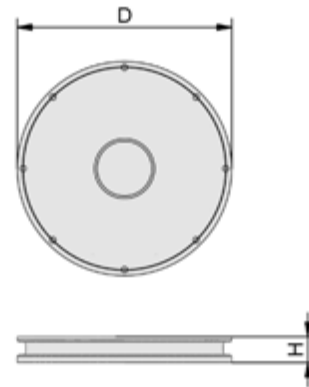
Accessories and Spare Parts ISMST, ISRPL, ISDR, DI-PROF, ISZR-V, VCMV, SIEB, TV



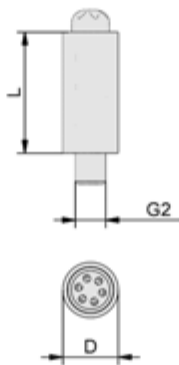
Design Data Accessories and Spare Parts



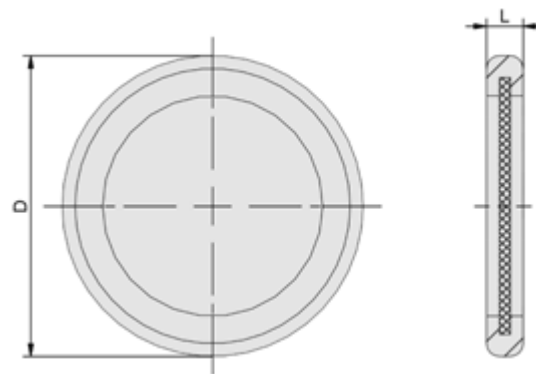
DI-PROF



VCMV



TV



SIEB

Type	D [mm]	d [mm]	H [mm]
ISZR-V 80x15	80	60	15
ISZR-V 80x20	80	60	20
ISZR-V 80x40	80	60	40
ISZR-V 80x45	80	60	45
ISZR-V 80x48	80	60	48

Type	B [mm]	H [mm]	L [mm]
ISDR 81x81x12 Cup 1 NK-50	81	12	81
ISDR 81x43x12 Cup 2 NK-50	43	12	81
ISDR 81x31x12 Cup 3 NK-50	31	12	81
ISDR 100x100x12 Cup 4	100	12	100

Accessories and Spare Parts

Accessories and Spare Parts ISMST, ISRPL, ISDR, DI-PROF, ISZR-V, VCMV, SIEB, TV



Design Data Accessories and Spare Parts

Type	B [mm]	H [mm]	L [mm]
ISRPL 66x14x8.5	14	9	66
ISRPL 66x26x8.5	26	9	66
ISRPL 66x66x8.5	66	9	66
ISRPL 86x86x8.7 NBR-55 d5	86	9	86

Type	B [mm]	D [mm]	G2	H [mm]	L [mm]
ISMST 19-7 4ISMST	-	7	-	12	-
DI-PROF 4x10 MOS EPDM HR	4	-	-	10	-
VCMV 3 25	-	25	-	3	-
TV D11 4.3	-	11	M6-M	-	24
SIEB 11x1 MS-A2 100	-	11	-	-	1

Clamping Solutions for Manual Work



Overview of Section

At a Glance

Clamping Solutions for Manual Work

Clamping Solutions for Manual Work			Page
	<p>Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV</p> <ul style="list-style-type: none"> • Suction plate for direct fixing on the workbench • Internal or external vacuum generation available 		<p>104</p>
	<p>Multi-Clamp System VC-M / VC-M-V</p> <ul style="list-style-type: none"> • System consists of suction plate and rotation/swiveling unit Multi-Base • Internal or external vacuum supply possible 		<p>107</p>
	<p>Multi-Clamp Vacuum Pump VC-M-PU</p> <ul style="list-style-type: none"> • Portable electrical vacuum pump • Ready to connect to the AC power supply 		<p>110</p>

Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

Suction area (L x W) 160 x 160 mm



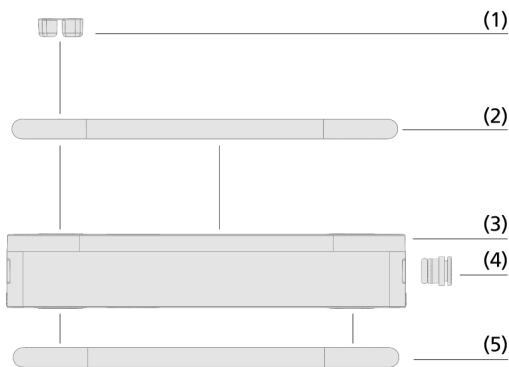
Suitability for Industry Specific Applications



Applications

- Multi-Clamp suction plate for clamping small and medium-size workpieces for manual processing or mounting
- The bottom suction area fixes the suction plate to the workbench, while the vacuum on the top side fixes the workpiece
- Version VC-M-SP with integrated vacuum generation through the Venturi principle (can be operated on any conventional compressed air supply)
- Version VC-M-SPV with connection for external vacuum pump for independent use at any location

Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV



Design

- Friction pads (1) for increasing the lateral force absorption
- Upper sealing profile (2) for fixing the workpiece
- Robust main body (3) made of plastic
- Compressed air or vacuum inlet (4) based on the design
- Downward sealing profile (5) for fixing the suction plate to the workbench

System Design Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV



Suction Plate Multi-Clamp VC-M-SP for manual processing of wooden workpieces

Our Highlights...

- Soft friction and sealing materials
- VC-M-SP variant with integrated vacuum generation
- Very simple assembly and operation

Your Benefits...

- Clamping solution that is gentle on the workpiece compared to conventional manual clamping systems
- No additional vacuum pump required
- Immediately ready for use anywhere

Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

Suction area (L × W) 160 × 160 mm



Designation Code Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

VC-M-SPV	–	160x160
1		2

1 – Abbreviated designation

Code	Type
VC-M-SP	Multi-Clamp suction plate, integrated vacuum generation
VC-M-SPV	Multi-Clamp suction plate, external vacuum generation

2 – Dimensions

Code	LxW in mm
160x160	160x160

The Multi-Clamp suction plate is supplied in individual parts. The delivery consists of:


- Suction plate with mounted seal
- Manually operated valve
- Vacuum hose

Available spare parts: Sealing profile, friction insert

Available accessories: Accessory set for operating two suction plates with one pump or one ejector



Ordering Data Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

Type	Part no.
VC-M-SP 160x160x30	10.01.12.01836 
VC-M-SPV 160x160x30	10.01.12.01853



Ordering Data Spare Parts Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

Type	Friction insert	Sealing profile
VC-M-SP 160x160x30	10.01.12.02000	10.01.12.02056
VC-M-SPV 160x160x30	10.01.12.02000	10.01.12.02056



Ordering Data Accessories Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

Type	Accessories		Part no.
VC-M-SP 160x160x30	Accessories	Operation of two VC-M with one ejector	ZUB VC-M for ejector operation 10.01.12.02061
VC-M-SPV 160x160x30	Accessories	Operation of two VC-M-V with one pump	ZUB VC-M-V 10.01.12.02054



Technical Data Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

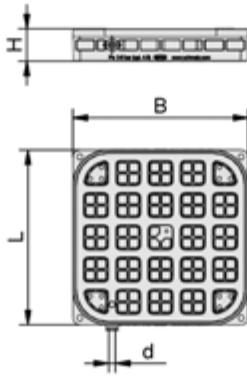
Type	Weight [g]	Suction rate [m³/h]	Air consumption [l/min]
VC-M-SP 160x160x30	875	3	48
VC-M-SPV 160x160x30	896	3	-

Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

Suction area (L x W) 160 x 160 mm



Design Data Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV



VC-M-SP, VC-M-SPV

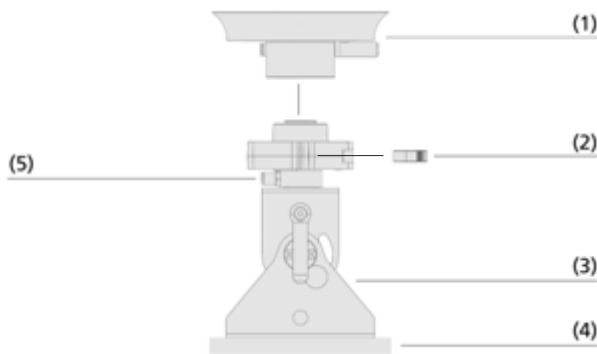
Type	B [mm]	d [mm]	H [mm]	L [mm]
VC-M-SP 160x160x30	160	6	30	160
VC-M-SPV 160x160x30	160	6	30	160

Multi-Clamp System VC-M / VC-M-V

Complete system consisting of the rotation/swiveling unit Multi-Base and a suction plate



Multi-Clamp System VC-M / VC-M-V



System Design Multi-Clamp System VC-M / VC-M-V



Multi-Clamp VC-M for manual processing of wooden workpieces

Suitability for Industry Specific Applications

Applications

- Version VC-M with integrated vacuum generation through the Venturi principle can be operated on any conventional compressed air supply
- Version VC-M-V with connection for external vacuum pump for independent use at any location
- Effortless gripping for small and medium sized workpieces
- Processing of workpieces from all sides with a continuous rotate and pivot function
- VC-M-V can be fixed to the table by vacuum, VC-M is fixed mechanically

Design

- Suction plate (1) can be freely rotated by 360° and continuously swiveled up to 90°, allowing for flexible work from any angle
- Different suction plates are available to suit the application
- Clamping lever (2) for quickly changing the Multi-Clamp suction plate
- Robust main body (3) made of metal
- Fixation on the worktable (4) possible mechanically or via vacuum
- Vacuum generation (5) optionally integrated via compressed air or external vacuum pump

Our Highlights...

- Soft friction and sealing materials
- Integrated vacuum generation with version VC-M
- Multi-Base can be continuously rotated by 360° and continuously swiveled up to 90°
- Individual use of the Multi-Clamp suction plate possible

Your Benefits...

- Clamping solution that is gentle on the workpiece compared to conventional manual clamping systems
- No additional expensive vacuum pump required
- Trouble-free, flexible five-side processing
- Cost-effective standalone clamping solution

Multi-Clamp System VC-M / VC-M-V

Complete system consisting of the rotation/swiveling unit Multi-Base and a suction plate



Designation Code Multi-Clamp System VC-M / VC-M-V

VC-M-V	–	265x170x220.5
1		2

1 – Abbreviated designation

Code	Type
VC-M	Clamping system Multi-Clamp, integrated vacuum generation
VC-M-V	Clamping system Multi-Clamp, external vacuum generation

2 – Dimensions

Code	LxWxH in mm
165x165x220.5...	165x165x220.5 and 265x170x220.5
265x170x220.5	265x170x220.5

The Multi-Clamp System is delivered assembled. The product consists of:

- Suction plate with seal
- Multi-Base with rotation and swivelling unit
- Vacuum hose

Available spare parts: Friction insert, sealing profile

Available accessories: Multi-Base VC-M-B, Multi-Clamp suction plate VC-M-SP, Multi-Base VC-M-BV, Multi-Clamp suction plate VC-M-SPV, Multi-Clamp vacuum pump VC-M-PU, Foot-operated interrupter FU, accessories



Ordering Data Multi-Clamp System VC-M / VC-M-V

Type	Part no.
VC-M 165x165x220.5	10.01.12.01845
VC-M-V 265x170x220.5	10.01.12.01852



Ordering Data Spare Parts Multi-Clamp System VC-M / VC-M-V

Type	Friction insert	Sealing profile
VC-M 165x165x220.5	10.01.12.02000	10.01.12.02056
VC-M-V 265x170x220.5	10.01.12.02000	10.01.12.02056

Multi-Clamp System VC-M / VC-M-V

Complete system consisting of the rotation/swiveling unit Multi-Base and a suction plate



Ordering Data Accessories Multi-Clamp System VC-M / VC-M-V

Type		Part no.
Multi-Base	VC-M-B 170x165x209	10.01.12.01854
Multi-Clamp - Suction plate	VC-M-SP 200x55	10.01.12.02003
Multi-Clamp - Suction plate	VC-M-SP 210	10.01.12.02002
Multi-Clamp - Suction plate	VC-M-SP 300x100	10.01.12.02052
Multi-Base	VC-M-BV 265x170x209	10.01.12.02050
Multi-Clamp - Suction plate	VC-M-SPV 200x55	10.01.12.02009
Multi-Clamp - Suction plate	VC-M-SPV 210	10.01.12.02008
Multi-Clamp - Suction plate	VC-M-SPV 300x100	10.01.12.02053

Type	VC-M-PU 4 110V-AC	VC-M-PU 4 230V-AC	FU 5 3/2 R	FU 7.2 3/2 R
VC-M 165x165x220.5	-	-	-	10.01.12.03565
VC-M-V 265x170x220.5	10.01.12.02051	10.01.12.02040	10.01.12.03036	-

Type	Accessories	Accessories	Part no.
VC-M 165x165x220.5	Accessories	Operation of two VC-M with one ejector	ZUB VC-M for ejector operation
VC-M-V 265x170x220.5	Accessories	Operation of two VC-M-V with one pump	ZUB VC-M-V
			10.01.12.02061
			10.01.12.02054

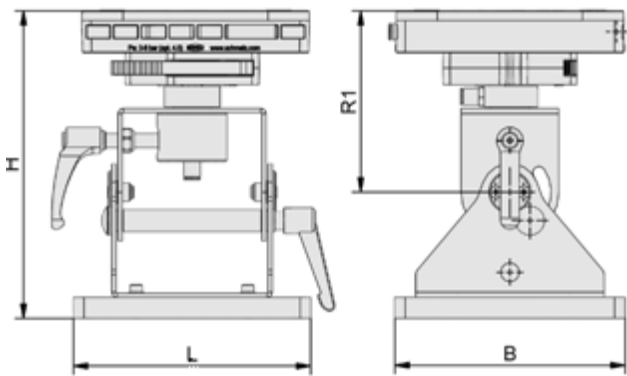


Technical Data Multi-Clamp System VC-M / VC-M-V

Type	Weight [g]	Air consumption [l/min]	Suction rate [m³/h]
VC-M 165x165x220.5	5,762	48.0	3
VC-M-V 265x170x220.5	5,450	-	3



Design Data Multi-Clamp System VC-M / VC-M-V



VC-M, VC-M-V

Type	B [mm]	H [mm]	L [mm]	R1 [mm]
VC-M 165x165x220.5	165	221	165	156
VC-M-V 265x170x220.5	170	221	265	130



Multi-Clamp Vacuum Pump VC-M-PU

Suction rate of 4.1 m³/h



Suitability for Industry Specific Applications



Applications

- Portable vacuum pump for use in combination with the Schmalz Multi-Clamp
- Thanks to its compact and solid design and its power, the pump is suitable for a multitude of additional applications
- Plug-and-play solution thanks to vacuum connection via quick-connect coupling and AC power supply

Multi-Clamp Vacuum Pump VC-M-PU

Design

- Dry-running, oil-free vacuum pump
- Ready-to-connect design with quick-connect coupling (ND 5 mm) and AC plug
- Integrated easy-to-clean filter

Our Highlights...

- High-performance, dry-running vacuum pump
- Integrated vacuum gauge
- Integrated cable reel
- Ergonomic design

Your Benefits...

- Suitable for a multitude of applications
- Quickly readable vacuum level
- No loose cables
- Suitable for mobile use on construction sites



Designation Code Multi-Clamp Vacuum Pump VC-M-PU

VC-M-PU	–	4	–	110V-AC
1		2		3

1 – Abbreviated designation

Code	Type
VC-M-PU	Multi-Clamp vacuum pump

2 – Performance class

Code	Suction capacity in m ³ /h
4	4

3 – Supply voltage

Code	Type
110V-AC	110 Volt single-phase
230V-AC	230 Volt single-phase

The Multi-Clamp vacuum pump is delivered assembled. The product consists of:

- Dry-running vacuum pump
- Housing with integrated cable drum and vacuum manometer

Available accessories: foot interrupter, accessory set for operation of two VC-M-V with one pump



Multi-Clamp Vacuum Pump VC-M-PU

Suction rate of 4.1 m³/h

Ordering Data Multi-Clamp Vacuum Pump VC-M-PU

Type	Part no.
VC-M-PU 4 110V-AC	10.01.12.02051
VC-M-PU 4 230V-AC	10.01.12.02040



Ordering Data Accessories Multi-Clamp Vacuum Pump VC-M-PU

Type	Part no.
Accessories	ZUB VC-M-V
Foot-operated interrupter	FU 5 3/2 R

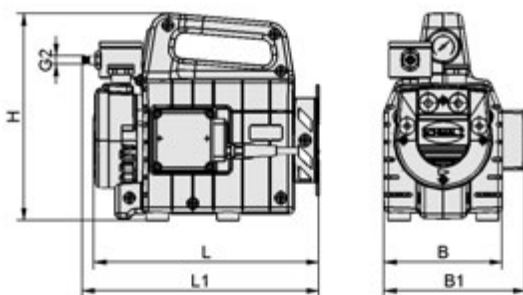


Technical Data Multi-Clamp Vacuum Pump VC-M-PU

Type	Rated power 50 Hz [kW]	Rated power 60 Hz [kW]	Protection type IP	Suction rate (50 Hz) [m ³ /h]	Suction capacity (60 Hz) [m ³ /h]	Voltage 50 Hz	Voltage 60 Hz	Weight [kg]
VC-M-PU 4 110V-AC	0.18	0.22	IP 54	-	4.7	110V - AC V	110V - AC V	8.5
VC-M-PU 4 230V-AC	0.18	0.22	IP 54	4.1	-	230V - AC V	230V - AC V	8.5



Design Data Multi-Clamp Vacuum Pump VC-M-PU



VC-M-PU 4

Type	B [mm]	B1 [mm]	G2	H [mm]	L [mm]	L1 [mm]
VC-M-PU 4 110V-AC	134	161	G1/4"-M	236	255	269
VC-M-PU 4 230V-AC	134	161	G1/4"-M	236	255	269

Clamping Equipment for Flat Table Systems



Overview of Section

At a Glance

Selection Aid

Page



Design of Flat Table Systems for Wood Working
Design of Flat Table Systems for Glass Processing

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Flat Table Systems for Wood Working



Vacuum Blocks VCBL-G-K2

- 2-circuit vacuum system
- With two hose connections
- Pre-fixation by means of vacuum



Vacuum Block VCBL-G-K2 for universal use with any CNC machining center with a flat table.



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Mechanical Clamps VCMC-G

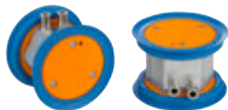
- 2-circuit vacuum system
- For frame and window profiles
- Fixation and positioning with vacuum



Mechanical clamp VCMC-G for universal use with any CNC machining center with a flat table.

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Flat Table Systems for Glass Working



Vacuum Block VCBL-GL


- 2-circuit vacuum systems
- With two hose connections



Vacuum Blocks VCBL-GL for use on CNC glass processing centres with smooth table system of the Japanese machine manufacturer Bando Kiko*.



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 Schmalz Select preferred product range – Article selection in the product family. Further information: WWW.SCHMALZ.COM/SELECT

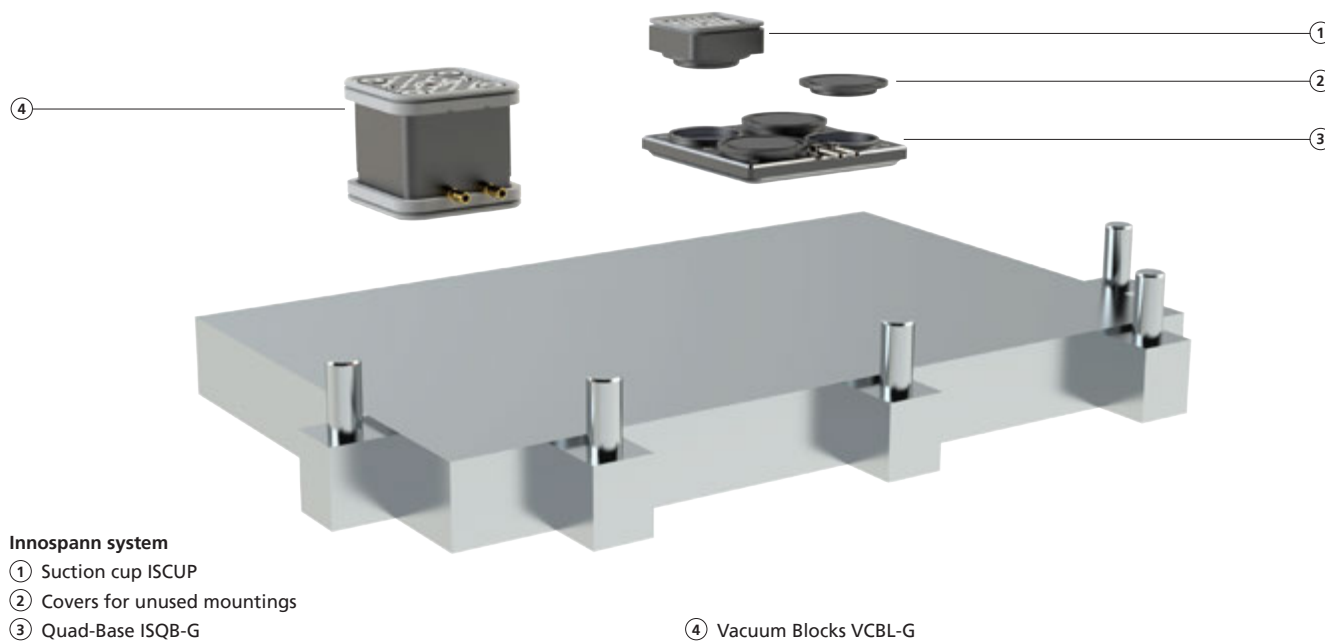
*Bando Kiko is a registered trademark. The products listed here were developed by J. Schmalz GmbH to fit machines by this manufacturer.



Selection Based on Machine Design

At a Glance

Design of Flat Table Systems for Woodworking



Design of Flat Table Systems for Glass Processing



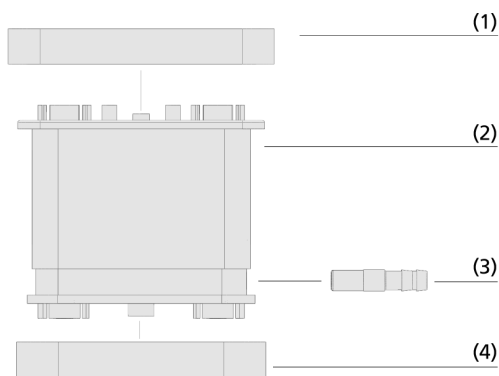
Vacuum Blocks VCBL-G-K2



Height 100 mm



Vacuum Blocks VCBL-G-K2



System Design Vacuum Blocks VCBL-G-K2



Vacuum Block VCBL-G-K2 for gripping particle boards

Suitability for Industry Specific Applications

Applications

- Universal vacuum clamping system with hose connection for CNC machining centers with flat table (2-circuit system)
- The suction cup is connected to the machine vacuum supply by two hoses
- One vacuum line (circuit 1) supplies the bottom suction plate for fixing the suction cup to the machine table, while the second line (circuit 2) supplies the top suction plate for fixing the workpiece to the suction cup
- Enables damage-free clamping with the highest precision and holding force

Design

- Suction plate top (1) for fixing the workpiece
- Robust plastic body (2)
- Hose connections (3) for vacuum supply
- Bottom suction plate (4) for fixing the suction cup on the console

Our Highlights...

- Sealing edges and friction surfaces tailored for wooden surfaces
- High dimensional accuracy
- Large selection of different designs
- Replacement suction plates can be exchanged without tools

Your Benefits...

- Extremely high resistance to lateral forces
- Enables highest accuracy in the production process
- Maximum flexibility and set-up time reduction
- Fast, easy and cost effective replacement of suction plates

Vacuum Blocks VCBL-G-K2

Height 100 mm



Designation Code Vacuum Blocks VCBL-G-K2

VCBL-G-K2	-	120x120	-	x100	-	ST	-	AS
1		2		3		4		5

1 – Abbreviated designation

Code	Type
VCBL-G-K2	Vacuum blocks for flat table systems, 2-circuit console system

2 – Suction area

Code	LxW in mm
120x50...	120x50 to 130x30
130x30	

3 – Height

Code	Height in mm
x100	100

4 – Product addition

Code	Type
ST	With hose sleeves

5 – Product addition

Code	Type
AS	With lifting system
TV	With touch valve

The vacuum block VCBL-G-K2 is delivered assembled. The product consists of:

- Top suction plate type VCSP-O - elastomer part, available in various dimensions and suction surfaces
- Base body made of plastic
- Bottom suction plate type VCSP-U - Elastomer part

Available spare parts: suction plate (top), wearing parts kit, sealing frame, friction plate, suction plate (bottom)

Available accessories: hose set, suction plate foam rubber



Ordering Data Vacuum Blocks VCBL-G-K2

Type		Dimensions (LxW):			
		120x50	120x120	125x75	130x30
VCBL-G	100 ST	10.01.12.00055	10.01.12.00053	10.01.12.00056	10.01.12.00059
VCBL-G	100 ST+AS	-	10.01.12.00054	-	-
VCBL-G	100 ST+TV	-	10.01.12.00905	10.01.12.00906	-



Ordering Data Spare Parts Vacuum Blocks VCBL-G-K2

Type	Spare Parts		Part no.
VCBL-G-K2 120x50x100 ST	Suction plate (top)	VCSP-O 120x50x15.5	10.01.12.00012
VCBL-G-K2 120x120x100 ST	Suction plate (top)	VCSP-O 120x120x16.5	10.01.12.00010
VCBL-G-K2 120x120x100 ST+AS	Suction plate (top)	VCSP-O 120x120x16.5	10.01.12.00010
VCBL-G-K2 120x120x100 ST+TV	Suction plate (top)	VCSP-O 120x120x16.5	10.01.12.00010
VCBL-G-K2 125x75x100 ST	Suction plate (top)	VCSP-O 125x75x16.5	10.01.12.00011
VCBL-G-K2 125x75x100 ST+TV	Suction plate (top)	VCSP-O 125x75x16.5	10.01.12.00011
VCBL-G-K2 130x30x100 ST	Set of parts subject to wear	VST VCSP	10.01.12.00723

Type	Sealing frame	Friction plate
VCBL-G 130x30	10.01.12.00804	10.01.12.00805

Type	Spare Parts	Part no.
VCBL-G	Suction plate (bottom)	VCSP-U 120x120x16.5 VCBL-G
		10.01.12.00063



Vacuum Blocks VCBL-G-K2

Height 100 mm



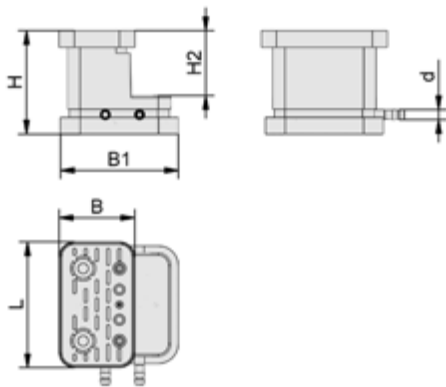
Ordering Data Accessories Vacuum Blocks VCBL-G-K2

Type	Accessories			Part no.
VCBL-G	Accessories clamping systems	2 x 1.5m hose with connectors	ZUB VCBL-G	10.01.12.00203

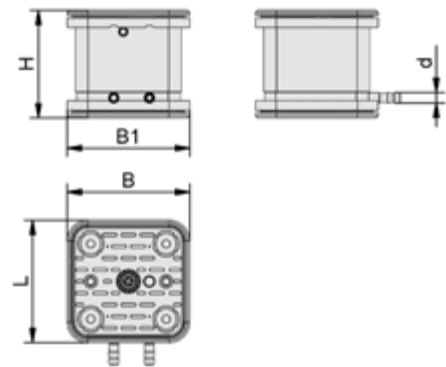
Type	Accessories			Part no.
VCBL-G 120x120	Suction plate (top)	Foam rubber suction plate	VCSP-O 120x120 MOS	10.01.12.01341
VCBL-G 125x75	Suction plate (top)	Foam rubber suction plate	VCSP-O 125x75x17.7 MOS	10.01.12.03511



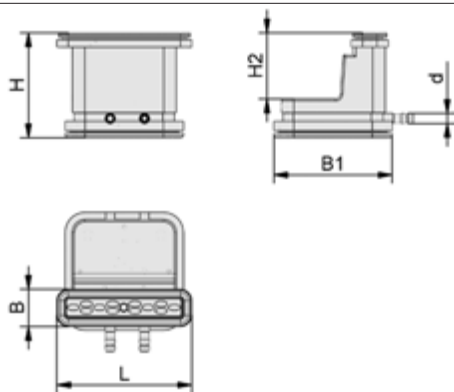
Design Data Vacuum Blocks VCBL-G-K2



VCBL-G-K2 120x50, VCBL-G-K2 125x75



VCBL-G-K2 120x120



VCBL-G-K2 130x30

Type	B [mm]	B1 [mm]	d [mm]	H [mm]	H2 [mm]	L [mm]
VCBL-G-K2 120x50x100 ST	50	117	10	100	63	120
VCBL-G-K2 120x120x100 ST	117	117	10	100	-	117
VCBL-G-K2 120x120x100 ST+AS	117	117	10	100	-	117
VCBL-G-K2 120x120x100 ST+TV	117	117	10	100	-	117
VCBL-G-K2 125x75x100 ST	75	117	10	100	63	125
VCBL-G-K2 125x75x100 ST+TV	75	117	10	100	63	125
VCBL-G-K2 130x30x100 ST	37	138	10	100	63	134

Mechanical Clamps VCMC-G

Clamping range 10 to 100 mm



Suitability for Industry Specific Applications



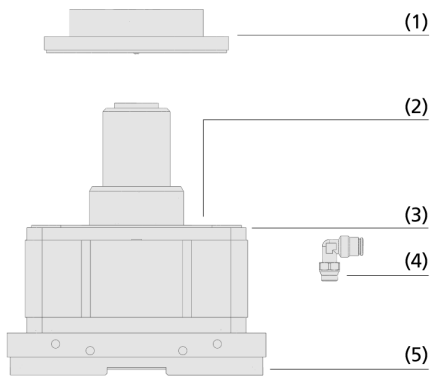
Mechanical Clamps VCMC-G

Applications

- Mechanical clamping system for CNC machining centers with flat table systems
- The mechanical clamps area activated via vacuum so that no further medium is required at the machine for clamping
- One vacuum line (circuit 1) supplies the bottom suction plate for fixing the clamp to the machine table, while the second vacuum line (circuit 2) pulls the piston and clamping disc down to fix the workpiece
- Particularly well suited for narrow and curved workpieces such as frame parts and window profiles

Design

- Eccentric clamping disc (1) is pulled downward by the operating vacuum via a piston in the clamp
- Friction material (2) for optimizing lateral force absorption
- Main body (3) made of aluminum
- Screw in push fitting (4) for vacuum feeder
- Interface to flat table (5) with sealing frame



System Design Mechanical Clamps VCMC-G



Mechanical Clamps VCMC-G for clamping several wooden strips

Our Highlights...

- Eccentrically positioned clamping discs
- Clamping forces of up to 700 N
- Actuated via the operating vacuum of the CNC machining center
- Special friction materials on clamping disc and clamping surface

Your Benefits...

- Optimal use of the available clamping surface
- Maximum holding force even with narrow workpieces
- No additional medium required at the machine
- Extra resistance to lateral forces

Mechanical Clamps VCMC-G

Clamping range 10 to 100 mm



Designation Code Mechanical Clamps VCMC-G

VCMC-G	-	154x128x100	-	10-100
1		2		3

1 - Abbreviated designation

Code	Type
VCMC-G	Mechanical clamp, flat table system

2 - Dimensions

Code	LxWxH in mm
154x128x100	154x128x100

3 - Clamping range

Code	Clamping range in mm
10-100	10-100

The mechanical clamp VCMC-G is delivered assembled. The product consists of:

- Clamping disc
- Main body made of aluminium

Available spare parts: Clamping disc



Ordering Data Mechanical Clamps VCMC-G

Type	Part no.
VCMC-G 154x128x100 10-100	10.01.12.01997



Ordering Data Spare Parts Mechanical Clamps VCMC-G

Type	Spare Parts	SPAN-TELL 110x14 EX VCMC	SPAN-TELL 110x25.5 EX VCMC	SPAN-TELL 110x40.5 EX VCMC
VCMC-G 154x128x100 10-100	Clamping disc	10.01.12.01980	10.01.12.01930	10.01.12.01936



Technical Data Mechanical Clamps VCMC-G

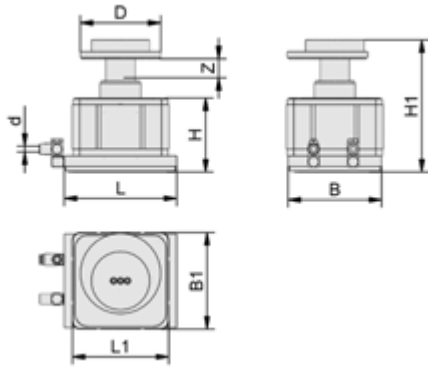
Type	Hose type construction
VCMC-G 154x128x100 10-100	Hose D = 8 d = 6

Mechanical Clamps VCMC-G

Clamping range 10 to 100 mm



Design Data Mechanical Clamps VCMC-G



VCMC-G

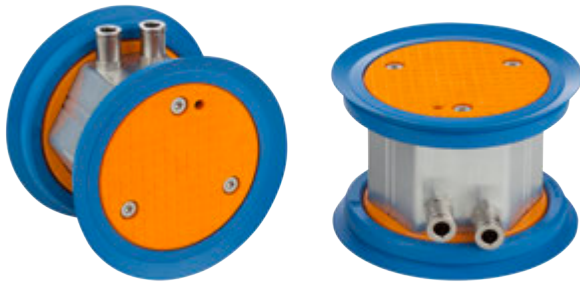
Type	B [mm]	B1 [mm]	d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	Z (Stroke) [mm]
VCMC-G 154x128x100 10-100	128	130	8	110	100	180	154	130	40

Vacuum Block VCBL-GL

Height 81.5 mm and 93.5 mm



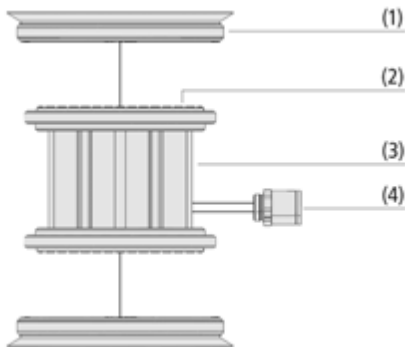
Suitability for Industry Specific Applications



Applications

- Vacuum Block VCBL-GL for grinding glass workpieces on flat table machines made by Bando Kiko*
- Grinding of building, design and automotive glass
- The suction cup is connected to the machine vacuum supply by two hoses

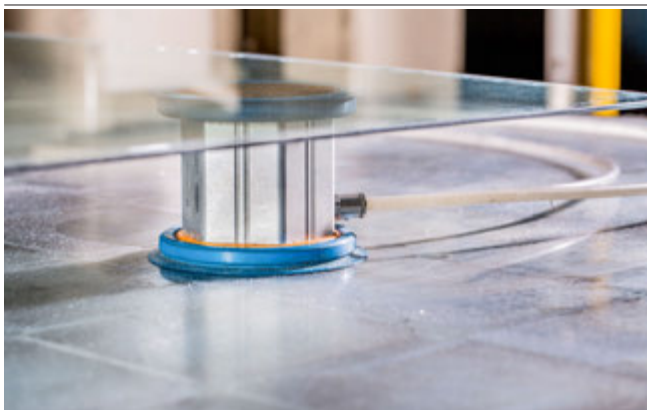
Vacuum Block VCBL-GL



Design

- Sealing ring (1) made of low-marking material for contamination-free fixing of the workpiece
- Friction surface (2) of resistant material for gentle clamping of wet, dry and thin glass
- Robust housing (3) made of aluminum
- Screw in push fitting accessories (4) for hose connection of the vacuum system

System Design Vacuum Block VCBL-GL



Vacuum Block VCBL-GL for clamping glass

Our Highlights...

- High lateral force absorption through durable friction pad
- High dimensional accuracy
- Replaceable sealing ring made of HT1 material leaving few marks and Elastodur friction plate
- Low sealing lip return force

Your Benefits...

- Extreme holding forces on dry or wet glass
- Enables the highest level of precision during the production process
- Workpiece surfaces left entirely free of marks
- No workpiece deformation

*Bando Kiko is a registered trademark. The products listed here were developed by J. Schmalz GmbH to fit machines by this manufacturer.

Flat Table Systems for Glass Working

Vacuum Block VCBL-GL



Height 81.5 mm and 93.5 mm



Designation Code Vacuum Block VCBL-GL

VCBL-GL	-	D120	-	x81.5
1		2		3

1 – Abbreviated designation

Code	Type
VCBL-GL	Vacuum blocks for flat table glass working centers from Bando Kiko

2 – Suction area

Code	Diameter in mm
D120	ø 120

3 – Height

Code	Height in mm
x81.5...	81.5 and 93.5
x93.5	

The vacuum block VCBL-GL is supplied as a ready-to-connect component.

Available spare parts: Sealing ring

Available accessories: Hose, valve, screw in push fitting



Ordering Data Vacuum Block VCBL-GL

Type	Part no.
VCBL-GL D120x81.5	10.01.18.00233
VCBL-GL D120x93.5	10.01.18.00587



Ordering Data Spare Parts Vacuum Block VCBL-GL

Type	Part no.
Sealing ring for suction plate DR 120/88.5x16.5 HT1-60	10.01.18.00249



Ordering Data Accessories Vacuum Block VCBL-GL

Type	Part no.
Vacuum hose VSL 8-6 PU	10.07.09.00003

Type	Part no.
Accessories-clamping systems ZUB VCBL-GL 3/2-way valve	10.01.18.00492
Accessories-clamping systems ZUB VCBL-GL STV-W + VRL	10.01.18.00493



Technical Data Vacuum Block VCBL-GL

Type	Hose type construction	Material workpiece support
VCBL-GL D120x81.5	Hose D = 8 d = 6	ED
VCBL-GL D120x93.5	Hose D = 8 d = 6	ED

*Bando Kiko is a registered trademark. The products listed here were developed by J. Schmalz GmbH to fit machines by this manufacturer.

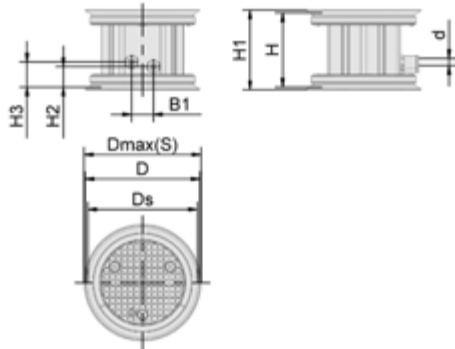


Vacuum Block VCBL-GL

Height 81.5 mm and 93.5 mm



Design Data Vacuum Block VCBL-GL



VCBL-GL D120

Type	B1 [mm]	d [mm]	D [mm]	Dmax(S) [mm]	Ds [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]
VCBL-GL D120x81.5	24	8	126	128	120	81.5	88	23	28
VCBL-GL D120x93.5	24	8	126	128	120	93.5	100	23	28

*Bando Kiko is a registered trademark. The products listed here were developed by J. Schmalz GmbH to fit machines by this manufacturer.

Quick-Change Systems



At a Glance

Quick-Change Systems for Bystronic* Machines

Page



Schmalz Quick-Change SQC


- Three-part quick-change system
- Hose-free vacuum line
- Fits machine tables with M12 vacuum feeds



Quick-change system for use on CNC glass grinding machines made by Bystronic.



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 Schmalz Select preferred product range – Article selection in the product family. Further information: WWW.SCHMALZ.COM/SELECT

*Bystronic is a registered and protected trademark. The articles listed here are products of J. Schmalz GmbH that have been designed to fit CNC machining centers from Bystronic.

Schmalz Quick-Change SQC



Working heights 80 mm and 120 mm



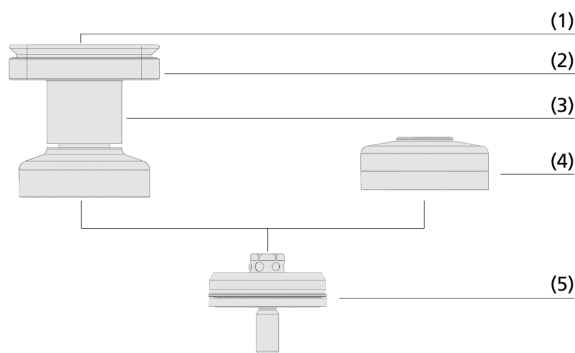
Suitability for Industry Specific Applications



Schmalz Quick-Change SQC

Applications

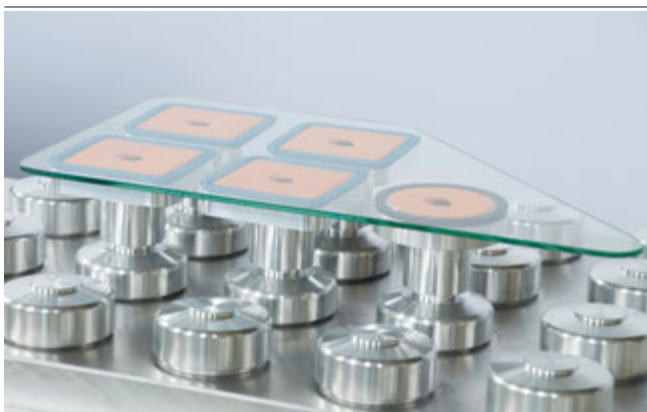
- Vacuum clamping system for grinding glass workpieces using CNC machines from the manufacturer Bystronic
- Used for grinding high-quality building, design and automotive glass
- Tool-free changeover to reduce set-up times and downtimes as well as simple retrofitting of existing machine tables
- Fully compatible with original equipment suction cups
- Working heights of 80 mm and 120 mm



Design

- Suction cup with sealing frame (1) made of HT1-material leaving few marks
- Square and round suction areas available (2)
- Aluminum housing with break joint (3)
- Mono-Base with hollow bolt for permanent mounting on a machine table (5)
- Cover (4) for bases that are not equipped with suction cups

System Design Schmalz Quick-Change SQC



Schmalz Quick-Change SQC for clamping glass

Our Highlights...

- Modular quick-change system with only three parts
- Sealing frame made of low-impression material can be replaced without tools
- Base stays on the machine table permanently
- High absorption of lateral forces
- Adjusted to working heights and interference contour of initial equipment

Your Benefits...

- Quick set-up processes of new machine layouts
- Mark free workpiece surface
- Low cleaning costs when changing layouts
- Very high holding force on dry or wet glass
- Mixed operation with originally fitted suction cups

*Bystronic is a registered and protected trademark. The articles listed here are products of J. Schmalz GmbH that have been designed to fit CNC machining centers from Bystronic.

Working heights 80 mm and 120 mm

**Designation Code Schmalz Quick-Change SQC****Module 1: Suction Cup**

SQC-C	–	RU	–	80x80	–	102	–	NBR
1		2		3		4		5

1 – Abbreviated designation

Code	Type
SQC-C	Quick-Change Suction Cup

2 – Design

Code	Type
RU	Round
VI	Rectangular

3 – Suction area

Code	Diameter / LxW in mm
80	ø 80
80x80	80x80

4 – Height

Code	Height in mm
62	For working height 80 mm
102	For working height 120 mm

5 – Material

Code	Material
HT1	High temperature material
NBR	Nitrile caoutchuc

Module 2: Mono-Base

SQC-MB	–	62.9	–	x18	–	M12-AG
1		2		3		4

1 – Abbreviated designation

Code	Type
SQC-MB	Quick-Change-Mono-Base

2 – Dimensions

Code	Diameter in mm
62.9	ø 62.9

3 – Height

Code	Height in mm
x18	18

4 – Connection

Code	Connection thread
M12-AG	M12-AG (AG = Male (M))

Module 3: Cover

ABDK	–	68x28	–	SQC
1		2		3

1 – Abbreviated designation

Code	Type
ABDK	Cover for Quick-Change-Mono-Base

2 – Dimensions

Code	Diameter in mm
68	ø 68

3 – Product addition

Code	Type
SQC	For SQC Mono-Base

The Schmalz Quick-Change System is not supplied assembled. The system consists of three components, which are ordered independently of each other, consisting of:





- Machine table interface: Schmalz Quick-Change Mono-Base SQC-MB with hollow screw, for permanent retention on machine table
- Suction cup: Schmalz Quick-Change Cup SQC-C, suction surface optionally square or round
- Cover: Schmalz Quick-Change Cover ABDK SQC

Available spare parts: Sealing frame, V-ring, hollow screw, pressure piece for 30° grid

*Bystronic is a registered and protected trademark. The articles listed here are products of J. Schmalz GmbH that have been designed to fit CNC machining centers from Bystronic.

Working heights 80 mm and 120 mm



**Ordering Data Schmalz Quick-Change SQC**

Type	Part no.
SQC-C-RU-80x62-HT1	10.01.18.01091 
SQC-C-RU-80x62-NBR	10.01.18.01033 
SQC-C-RU-80x102-HT1	10.01.18.01090 
SQC-C-RU-80x102-NBR	10.01.18.01037 
SQC-C-VI-80x80x62-HT1	10.01.18.01038
SQC-C-VI-80x80x62-NBR	10.01.18.01093
SQC-C-VI-80x80x102-HT1	10.01.18.01039
SQC-C-VI-80x80x102-NBR	10.01.18.01092

Type	Part no.
SQC-MB-62.9x18-M12-AG	10.01.18.01031 

Type	Part no.
ABDK 68x12 SQC	10.01.18.01022 

**Ordering Data Spare Parts Schmalz Quick-Change SQC**

Type		Part no.
Sealing frame	ISDR 81x81x12 Cup 1 HT1	10.01.15.00962
Sealing frame	ISDR 81x81x12 Cup 1 NBR-50	10.01.15.00158 
Sealing frame	ISDR 81x12 SQC HT1	10.01.18.00842 
V-ring	V-RING 63x11 V-070 NBR	10.07.08.00554
Hollow screw, special shape	SCHR M12x52.9 VC-SYS	10.01.18.01030
Pressure piece	DRUC-STK 2.4x14 M5-AG GN615.1	20.05.07.00137

**Technical Data Schmalz Quick-Change SQC**

Type	Sealing material	Material workpiece support
SQC-C-RU-80x62-HT1	High temp material HT1	ED
SQC-C-RU-80x62-NBR	Perbunan	ED
SQC-C-RU-80x102-HT1	High temp material HT1	ED
SQC-C-RU-80x102-NBR	Perbunan	ED
SQC-C-VI-80x80x62-HT1	High temp material HT1	ED
SQC-C-VI-80x80x62-NBR	Perbunan	ED
SQC-C-VI-80x80x102-HT1	High temp material HT1	ED
SQC-C-VI-80x80x102-NBR	Perbunan	ED
SQC-MB-62.9x18-M12-AG	-	-
ABDK 68x12 SQC	-	-

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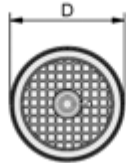
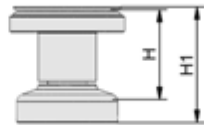
Schmalz Quick-Change SQC



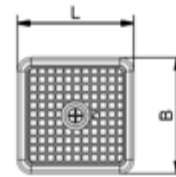
Working heights 80 mm and 120 mm



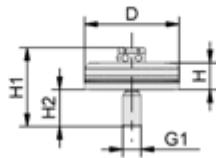
Design Data Schmalz Quick-Change SQC



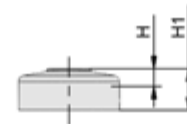
SQC-C-RU



SQC-C-VI



SQC-MB



ABDK SQC

Type	B [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]
SQC-C-RU-80x62-HT1	-	80	62	80	-
SQC-C-RU-80x62-NBR	-	80	62	80	-
SQC-C-RU-80x102-HT1	-	80	102	120	-
SQC-C-RU-80x102-NBR	-	80	102	120	-
SQC-C-VI-80x80x62-HT1	80	-	62	80	80
SQC-C-VI-80x80x62-NBR	80	-	62	80	80
SQC-C-VI-80x80x102-HT1	80	-	102	120	80
SQC-C-VI-80x80x102-NBR	80	-	102	120	80

Type	D [mm]	G1	H [mm]	H1 [mm]	H2 [mm]
SQC-MB-62.9x18-M12-AG	63	M12-M	18	53	25

Type	D [mm]	H [mm]	H1 [mm]
ABDK 68x12 SQC	68	12	28

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Clamping Equipment for Metal and Plastics Processing

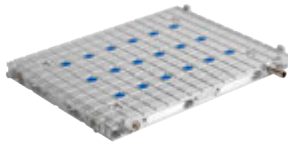


Overview of Section

At a Glance

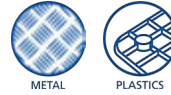
Clamping Systems Matrix-Plate

Page



Matrix-Plate MPL

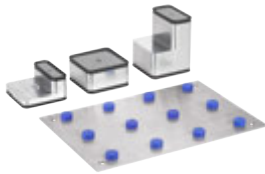
- Clamping system made of high-strength aluminum
- Adaptable to conventional clamping technology



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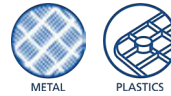
Clamping solution for use in precise clamping of flat workpieces, for low-vibration machining in metal and plastic cutting.

Innospann Systems for Metal and Plastic Processing



Innospann Steel-Plate System ISST-MPL

- Enhancement for the Schmalz Matrix-Plate
- For recesses and five-axis processing



135

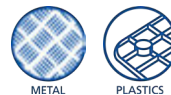
Modular clamping system in combination with aluminum Innospann suction cups for use in wet machining tasks.

Clamping Systems Schmalz FlexMat



Schmalz FlexMat SFM

- Elastomer mat with honeycomb suction points for extending the ISST-MPL



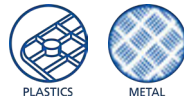
138

Used for vacuum clamping metal and plastic parts with recesses and discontinuous surfaces.

Matrix-Plate MPL



Grid sizes 12.5 and 25 mm



Suitability for Industry Specific Applications

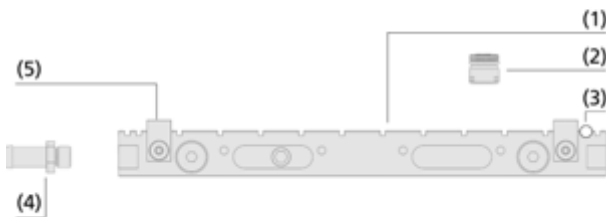


Applications

- Matrix-Plate MPL for workpieces made of aluminum and other nonferromagnetic materials such as CFK or plastic
- Matrix plate easily mounted on the machine table using clamping claws, vice or zero point clamping system
- Shortest set-up times and flexible adaptation to the workpiece geometry: Insert the sealing cord into the grooves according to the workpiece geometry, align the workpiece and clamp it
- Enlargement of clamping area possible by connecting several matrix plates
- Mechanical stops as positioning aids

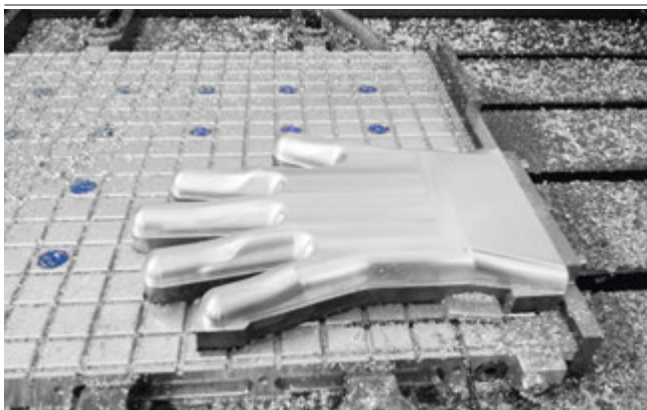
Matrix-Plate MPL

Design



- Main body (1) made of high-strength aluminum
- Friction pads (2) for improved lateral force absorption
- Sealing cord (3) for sealing workpiece and Matrix-Plate
- Vacuum connection (4) to the vacuum generator
- Aluminum stops (5) for positioning the workpiece

System Design Matrix-Plate MPL



Matrix-Plate MPL for clamping aluminum parts

Our Highlights...

- Main body made of high-strength and precisely manufactured aluminium
- Easy to handle
- Adaptation to conventional clamping devices such as vice, zero point clamping system, etc. possible
- Mechanical stops mounted on the side

Your Benefits...

- Distortion-free clamping of large, flat workpieces
- Short set-up times
- Supplementation of the clamping device portfolio in every production line
- Simple positioning of the workpiece and additional absorption of transverse forces

Grid sizes 12.5 and 25 mm

**Designation Code Matrix-Plate MPL**

MPL	–	300x200x28	–	25x25	–	3x3	–	RI
1		2		3		4		5

1 – Abbreviated designation

Code	Type
MPL	Clamping system Matrix-Plate

2 – Dimensions

Code	LxWxH in mm
300x200x28...	300x200x28 to
600x400x28	600x400x28

3 – Grid dimensions

Code	Grid dimension in mm
12.5x12.5...	12,5x12,5 and 25x25
25x25	

4 – Groove measure

Code	Groove measure in mm
3x3	3x3

5 – Product addition

Code	Type
RI	With friction pad

The Matrix Plate MPL from Schmalz is supplied assembled. The delivery consists of:

- Matrix-Plate made of aluminium with milled grid and, if necessary, with friction inserts, depending on the design
- Mechanical stops
- Hose vacuum connection
- Hollow screw for connecting several fitting as Matrix-Plates
- Vacuum hose

Available spare parts: Matrix-Plate stop, friction insert, sealing cord

Available accessories: hose sleeve, vacuum distributor, connection set, tensioning claw, vacuum hose, hose clamp

**Ordering Data Matrix-Plate MPL**

Type	Part no.
MPL 300x200x28 12.5x12.5 3x3	10.01.27.00100
MPL 300x200x28 25x25 3x3	10.01.27.00101
MPL 300x200x28 25x25 3x3 RI	10.01.27.00102
MPL 400x300x28 12.5x12.5 3x3	10.01.27.00103
MPL 400x300x28 25x25 3x3	10.01.27.00104
MPL 400x300x28 25x25 3x3 RI	10.01.27.00106
MPL 600x400x28 12.5x12.5 3x3	10.01.27.00108
MPL 600x400x28 25x25 3x3	10.01.27.00109
MPL 600x400x28 25x25 3x3 RI	10.01.27.00111

**Ordering Data Spare Parts Matrix-Plate MPL**

Type	Part no.
Stop Matrix-Plate	ANSG-MPL 8x15x25 10.01.27.00079
Friction insert	REIB-INS 18x18 MPL 10.01.27.00060

Type	DI-SCHN 3 MOS CR-20	DI-SCHN 3.5 MOS CR-20
Sealing cord	10.07.04.00088	10.07.04.00091

Matrix-Plate MPL

Grid sizes 12.5 and 25 mm

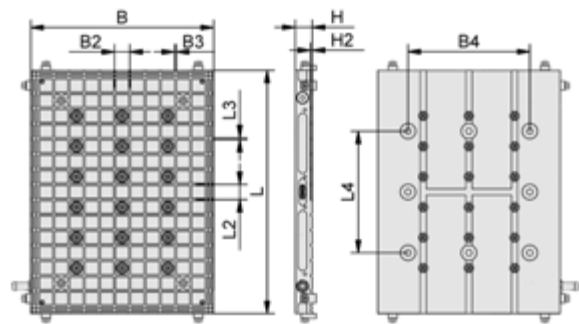
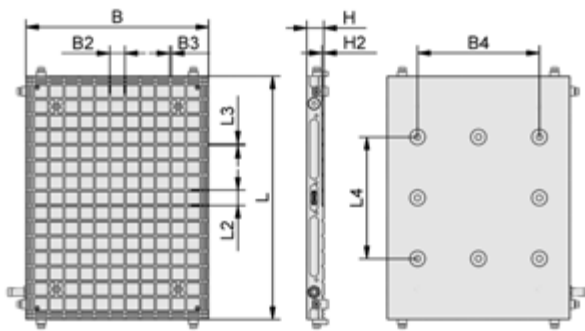


Ordering Data Accessories Matrix-Plate MPL

Type		Part no.
Hose sleeve	ST G1/4-AG 13 MS-V	10.08.03.00158
Hose sleeve	ST G3/4-AG 13 MS-V	10.08.03.00164
Hose sleeve	ST G3/4-AG 25 MS-V	10.08.03.00166
Vacuum distributor	VTR-ZF ST-Dn12 8xG1/4 1TN MAN/KVZ	10.01.27.00126
Connection set	SET VC-MPL	10.01.27.00456
Tensioning claw	SPAN-PRA-M12-MPL	10.01.27.00009
Vacuum hose	VSL 21-12 PVC-G	10.07.09.00006
Vacuum hose	VSL 33-25 PVC-DS	10.07.09.00041
Hose clamp	SSB 16-27 ST-VZ	10.07.10.00002
Hose clamp	SSB 20-32 ST-VZ	10.07.10.00003



Design Data Matrix-Plate MPL



MPL

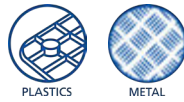
MPL RI

Type	B [mm]	B2 [mm]	B3 [mm]	B4 [mm]	H [mm]	H2 [mm]	L [mm]	L2 [mm]	L3 [mm]	L4 [mm]
MPL 300x200x28 12.5x12.5 3x3	200	10	3	100	28	3	300	10	3	150
MPL 300x200x28 25x25 3x3	200	22	3	100	28	3	300	22	3	150
MPL 300x200x28 25x25 3x3 RI	200	22	3	100	28	3	300	22	3	150
MPL 400x300x28 12.5x12.5 3x3	300	10	3	200	28	3	400	10	3	200
MPL 400x300x28 25x25 3x3	300	22	3	200	28	3	400	22	3	200
MPL 400x300x28 25x25 3x3 RI	300	22	3	200	28	3	400	22	3	200
MPL 600x400x28 12.5x12.5 3x3	400	10	3	200	28	3	600	10	3	200
MPL 600x400x28 25x25 3x3	400	22	3	200	28	3	600	22	3	200
MPL 600x400x28 25x25 3x3 RI	400	22	3	200	28	3	600	22	3	200

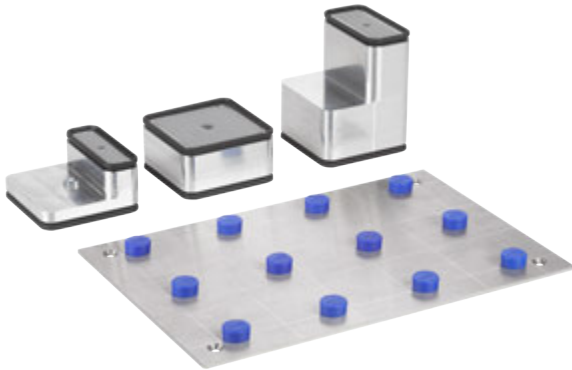


Innospann Steel-Plate System ISST-MPL

Grid measure 75 mm



Suitability for Industry Specific Applications

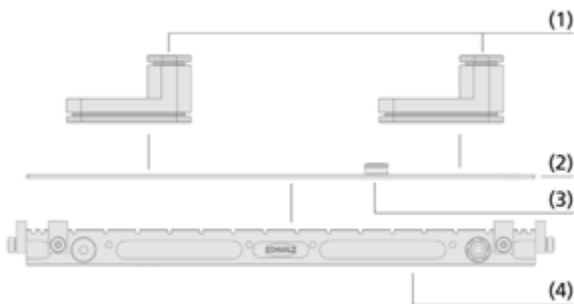


Innospann Steel-Plate System ISST-MPL

Applications

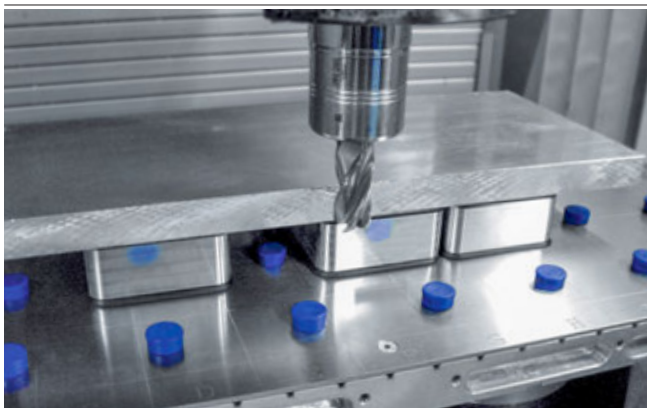
- Modular clamping system for precise metal and plastic machining
- The Steel-Plate is mounted vacuum-tight on the Schmalz Matrix-Plate
- Vacuum blocks ISBL are positioned flexibly and tubelessly above the vacuum openings and magnetically pre-fixed
- All the processed materials are optimized specially for use with cooling lubricants
- The modular design allows for quick changeovers for workpieces that are changed frequently, and can also be retrofitted for pre-installed Matrix-Plates

Design



- Vacuum block ISBL (1) made of aluminum with magnetic pre-fixing on the Steel-Plate
- Steel-Plate with vacuum openings (2)
- Sealing magnets (3) for unused vacuum openings
- Matrix-Plate with milled grid (4)

System Design Innospann Steel-Plate System ISST-MPL



Innospann Steel-Plate ISST-MPL with vacuum blocks ISBL for clamping aluminum

Our Highlights...

- Use in conjunction with Matrix Plate MPL
- Use with vacuum blocks ISBL
- Lasered grid
- All components made of aluminum, stainless steel and process adapted plastics

Your Benefits...

- Modular system for retrofitting
- Maximum flexibility for breakthroughs and 5-axis machining
- Orientation guide for the positioning of the vacuum blocks
- Coolant resistant and durable

Innospann Steel-Plate System ISST-MPL

Grid measure 75 mm

Designation Code Innospann Steel-Plate System ISST-MPL



1 – Abbreviated designation

Code	Type
ISST-MPL	Steel-Plate for Matrix-plate
ISBL	Innospann vacuum blocks for Steel-Plate ISST-MPL

2 – Dimensions

Code	LxW in mm
300x200... 600x400	300x200 to 600x400
80x28... 80x80	80x28 to 80x80

3 – Height

Code	Height in mm
x3	3
x38...x97	38 to 97

4 – Product addition

Code	Typ
SFM	For use with Schmalz FlexMat

The Innospann Steel-Plate System ISST-MPL from Schmalz is not supplied assembled. The system consists of several components that are ordered independently of each other:

- Steel-Plate made of stainless steel with or without magnetic plugs, depending on the design, suitable for use with the Matrix-Plate MPL (screws included for assembly)
- Vacuum block ISBL made of aluminium, optimized for use in wet machining

Available spare parts: Sealing magnet, sealing cord, sealing frame

Available accessories: Schmalz FlexMat

Ordering Data Innospann Steel-Plate System ISST-MPL

Type	Part no.
ISST-MPL 300x200x3	10.01.14.01124
ISST-MPL 300x200x3 SFM	10.01.28.00009
ISST-MPL 400x300x3	10.01.14.01125
ISST-MPL 400x300x3 SFM	10.01.28.00010
ISST-MPL 600x400x3	10.01.14.01126
ISST-MPL 600x400x3 SFM	10.01.28.00011

Type	Part no.
ISBL 80x28x38	10.01.15.00656
ISBL 80x28x97	10.01.15.00659
ISBL 80x40x38	10.01.15.00655
ISBL 80x40x97	10.01.15.00658
ISBL 80x80x38	10.01.15.00654
ISBL 80x80x97	10.01.15.00657

Ordering Data Spare Parts Innospann Steel-Plate System ISST-MPL

Type	Sealing magnet	Sealing cord
ISST-MPL	10.01.14.00847	10.07.04.00091

Type	Spare Parts	Part no.
ISST-MPL 80x28	Sealing frame	ISDR 81x31x12 Cup 3 NBR-50 10.01.15.00419
ISST-MPL 80x40	Sealing frame	ISDR 81x43x12 Cup 2 NBR-50 10.01.15.00418
ISST-MPL 80x80	Sealing frame	ISDR 81x81x12 Cup 1 NBR-50 10.01.15.00158

Innospann Steel-Plate System ISST-MPL

Grid measure 75 mm

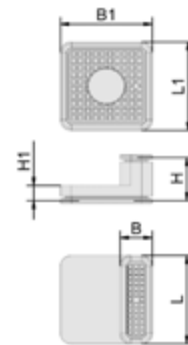
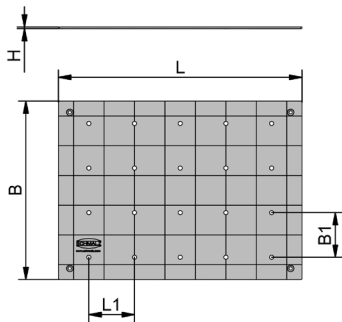


Ordering Data Accessories Innospann Steel-Plate System ISST-MPL

Type	Accessories	Part no.
ISST-MPL for SFM	Schmalz FlexMat	SFM-298.5x198.5 10.01.28.00005

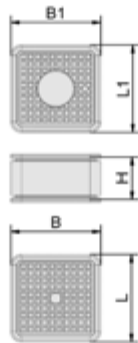


Design Data Innospann Steel-Plate System ISST-MPL



ISST-MPL

ISBL 80x28 - ISBL 80x40



ISBL 80x80

Type	B [mm]	B1 [mm]	H [mm]	L [mm]	L1 [mm]
ISST-MPL 300x200x3	200	75	3	300	75
ISST-MPL 300x200x3 SFM	200	75	3	300	75
ISST-MPL 400x300x3	300	75	3	400	75
ISST-MPL 400x300x3 SFM	300	75	3	400	75
ISST-MPL 600x400x3	400	75	3	600	75
ISST-MPL 600x400x3 SFM	400	75	3	600	75

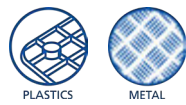
Type	B [mm]	B1 [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]
ISBL 80x28x38	28	80	38	13	80	80
ISBL 80x28x97	28	80	97	72	80	80
ISBL 80x40x38	40	80	38	13	80	80
ISBL 80x40x97	40	80	97	72	80	80
ISBL 80x80x38	80	80	38	-	80	80
ISBL 80x80x97	80	80	97	-	80	80



Schmalz FlexMat SFM



Standard dimensions 298.5 x 198.5 mm



Schmalz FlexMat SFM

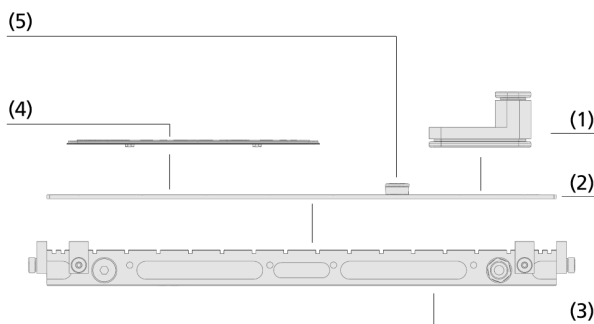
Suitability for Industry Specific Applications

Applications

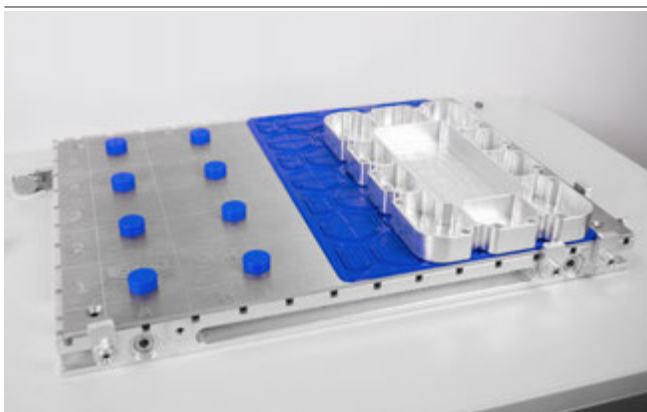
- Elastomer mat for clamping flat metal or plastic workpieces by means of vacuum
- Multiple vacuum chambers allow complex workpiece shapes to be flexibly and safely clamped, even if vacuum cannot be applied to the entire surface
- Specially developed for manufacturing recesses and easily replaceable when damaged
- High absorption of lateral forces due to elastomer surface
- Compatible with Schmalz Matrix-Plate MPL with Steel-Plate ISST-MPL
- If the mat is partially occupied, at least 50 % of the area should be occupied

Design

- Innospann vacuum block ISBL (1) made of aluminum
- Innospann Steel-Plate for adapting various clamping equipment (2)
- Matrix-Plate MPL (3) made of high-strength aluminum for mounting on the machine table
- Schmalz FlexMat SFM (4)
- Sealing magnet (5) to close unused vacuum openings



System Design Schmalz FlexMat SFM



Schmalz FlexMat SFM for clamping aluminum

Our Highlights...

- Vacuum distributed to various suction points
- Mat optimized for wear during milling
- High friction power due to elastomer surface
- Honeycomb structure of suction points creates a large usable area

Your Benefits...

- Milling possible with mat only in partially occupied
- Manufacturing of recesses and cost-effective replacement of the mat as a wearing part
- High absorption of lateral forces
- Maximum vacuum clamping force

Standard dimensions 298.5 x 198.5 mm

**Designation Code Schmalz FlexMat SFM**

SFM	–	298.5x198.5
1		2

1 – Abbreviated designation

Code	Type
SFM	Schmalz FlexMat for Steel-Plate ISST-MPL

2 – Dimensions

Code	LxW in mm
298.5x198.5	298.5x198.5

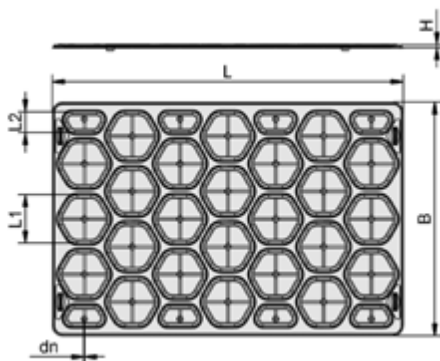
The Schmalz FlexMat SFM is supplied ready for connection to an ISST-MPL with matching additional holes.
Available accessories: Steel-Plate

**Ordering Data Schmalz FlexMat SFM**

Type	Part no.
SFM-298.5x198.5	10.01.28.00005

**Ordering Data Accessories Schmalz FlexMat SFM**

Type	Accessories	ISST-MPL 300x200x3 SFM	ISST-MPL 400x300x3 SFM	ISST-MPL 600x400x3 SFM
SFM-298.5x198.5	Steel-Plate	10.01.28.00009	10.01.28.00010	10.01.28.00011

**Design Data Schmalz FlexMat SFM**

SFM

Type	B [mm]	dn [mm]	H [mm]	L1 [mm]	L2 [mm]
SFM-298.5x198.5	199	0.4	2.5	41	18

Clamping Equipment for 3D Freeform Surfaces



Overview of Section

At a Glance

Clamping Equipment for Manual Processing

Page



Basic Holding Fixture BHF

- Flexible, manually adjustable clamping solution for free-form workpieces
- Pre-fastening using vacuum or magnets



Clamping solution for use in machining, measuring, or mounting three-dimensional parts.

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Clamping and Gripping Equipment for Automated Processing



Suction-Cup Balance SSCB

- Clamping and gripping system for free-form 3D contours
- Precise, accurate workpiece positioning enables automated assembly processes



Suction cup for clamping and gripping processes in automated production with manual or automated set-up process.

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Basic Holding Fixture BHF

Compatible with flat tables and Innospann Steel-Plate



Suitability for Industry Specific Applications



Basic Holding Fixture BHF

Applications

- Basic Holding Fixture BHF for use with CNC laser and milling processes in the woodworking, metal, plastics and fiber composite industry
- Manual processing and finishing of components, for example during sawing, drilling or sanding processes
- System consisting of various suction cups and the Schmalz Uni-Base as interface to the machine table and for setting the degrees of freedom
- Use on flat tables or other machine table types in combination with the Schmalz Steel-Plate
- Flexible manual adjustment of stroke and swivel angle
- High degree of freedom on every axis and easy to adjust



System Design Basic Holding Fixture BHF

Design

- Suction cups (1) in various shapes for optimum adaptability
- Easy adjustment of the angle of inclination by means of ball joint (2) on the Uni-Base UB
- Star grip (3) for precise height adjustment, securely fixed using the clamping lever
- Compressed air connection (4) for the supply of clampable elements
- Simple to position and pre-fasten using the magnetic base plate (5)



Uni-Base UB and Reference suction cup RSC for clamping carbon fiber-reinforced plastic parts

Our Highlights...

- Uni-Base adjustable in height and angle
- Can be used with flat tables and Innospann Steel-Plate
- Various suction cups with connection to the Uni-Base

Your Benefits...

- Maximum spatial freedom to suit any workpiece shape
- Can be used in connection with other clamping equipment from Schmalz
- Ideal adaptation to the workpiece and processes

Basic Holding Fixture BHF

Compatible with flat tables and Innospann Steel-Plate



Designation Code Basic Holding Fixture BHF

Module 1: Uni-Base

UB	–	135x135x156	–	29.5	–	15	–	G
1		2		3		4		5

1 – Abbreviated designation

Code	Type
UB	Vacuum block mounting Uni-Base

2 – Dimensions

Code	LxWxH in mm
135x135x156	135x135x156

3 – Stroke

Code	Stroke in mm
29.5	29.5

4 – Swivel angle

Code	Type
15	15°

5 – Product addition

Code	Type
G	For flat table
ISST	For Steel-Plate

Module 2: Suction-Cup

ISCUP	–	Cup 1	–	80x80	–	x30	–	TV
1		2		3		4		5

1 – Abbreviated designation

Code	Type
ISCUP	Top part of the suction cups for UB

2 – Version

Code	Type
CUP 1...4	Cup 1 to 4

3 – Suction area

Code	LxW in mm
80x28... 100x100	80x28 to 100x100

4 – Height

Code	Height in mm
x16...x30	16 and 30

5 – Product addition

Code	Type
TV	With touch valve

SSPB	–	117	–	117-125	–	NBR
1		2		3		4

1 – Abbreviated designation

Code	Type
SSPB	Suction plate Balance

2 – Dimensions

Code	Diameter in mm
-117	ø 117

3 – Application

Code	Insert height from recording in mm
117-125	117 to 125

4 – Material sealing

Code	Type
NBR	Nitrile caoutchuc

The Basic Holding Fixture BHF clamping system from Schmalz is not supplied assembled. The system consists of several components which are ordered independently of each other:

- Uni-Base UB suitable for Schmalz Steel-Plate ISST-MPL or for a flat table
- Innospann Vacuum Cups ISCUP
- Schmalz Balance SSPB suction plate with matching Innospann mounting

Available Accessories: Reference suction cup RSC

Basic Holding Fixture BHF

Compatible with flat tables and Innospann Steel-Plate



Ordering Data Basic Holding Fixture BHF

Type	Part no.
UB 135x135x156 29.5 15 G	10.01.15.00571
UB 135x135x156 29.5 15 ISST	10.01.15.00564

Type	Part no.
ISCUP Cup 1 80x80x16	10.01.15.00209
ISCUP Cup 2 80x40x16	10.01.15.00210
ISCUP Cup 3 80x28x16	10.01.15.00211
ISCUP Cup 1 80x80x30	10.01.15.00003
ISCUP Cup 2 80x40x30	10.01.15.00004
ISCUP Cup 3 80x28x30	10.01.15.00005
ISCUP Cup 1 80x80x30 TV	10.01.15.00303
ISCUP Cup 2 80x40x30 TV	10.01.15.00305
ISCUP Cup 4 100x100x30	10.01.15.00403
ISCUP Cup 4 100x100x30 TV	10.01.15.00405

Type	Part no.
SSPB-117 117-125 NBR	10.01.15.00719

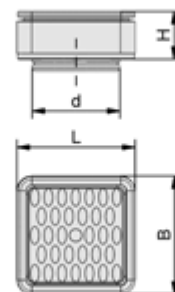
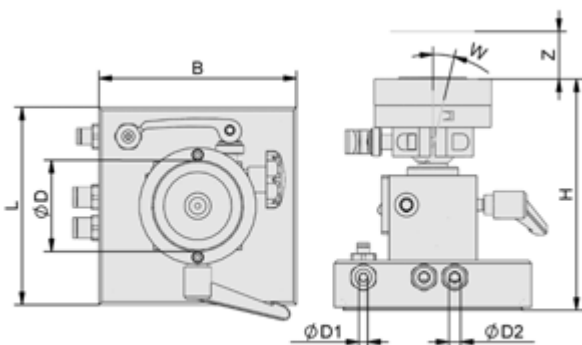


Ordering Data Accessories Basic Holding Fixture BHF

Type	Part no.	
Reference suction cup	RSC 85x120-VU1-40-IS-BHF	10.01.15.00587



Design Data Basic Holding Fixture BHF



UB

ISCUP Cup 1, ISCUP Cup 4

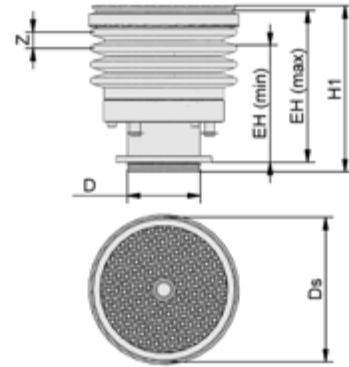
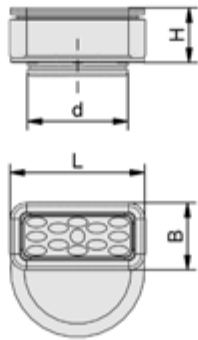


Basic Holding Fixture BHF

Compatible with flat tables and Innospann Steel-Plate



Design Data Basic Holding Fixture BHF



ISCUP Cup 2, ISCUP Cup 3

SSPB

Type	B [mm]	D [mm]	D1 [mm]	D2 [mm]	H [mm]	L [mm]	W [°]	Z (Stroke) [mm]
UB 135x135x156 29.5 15 G	135	61	6	8	156	135	15	29.5
UB 135x135x156 29.5 15 ISST	135	61	6	8	156	135	15	29.5

Type	B [mm]	d [mm]	H [mm]	L [mm]
ISCUP Cup 1 80x80x16	80	60	16	80
ISCUP Cup 2 80x40x16	40	60	16	80
ISCUP Cup 3 80x28x16	28	60	16	80
ISCUP Cup 1 80x80x30	80	60	30	80
ISCUP Cup 2 80x40x30	40	60	30	80
ISCUP Cup 3 80x28x30	28	60	30	80
ISCUP Cup 1 80x80x30 TV	80	60	30	80
ISCUP Cup 2 80x40x30 TV	40	60	30	80
ISCUP Cup 4 100x100x30	100	60	30	100
ISCUP Cup 4 100x100x30 TV	100	60	30	100

Type	D [mm]	Ds [mm]	EH (min) [mm]	EH (max) [mm]	H1 [mm]	Z (Stroke) [mm]
SSPB-117 117-125 NBR	60	117	117	125	137	8

Suction-Cup Balance SSCB

Gripping area Ø 22 mm and 60 mm



Suitability for Industry Specific Applications

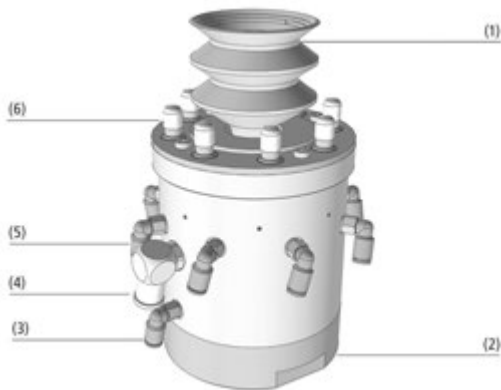


Suction-Cup Balance SSCB

Applications

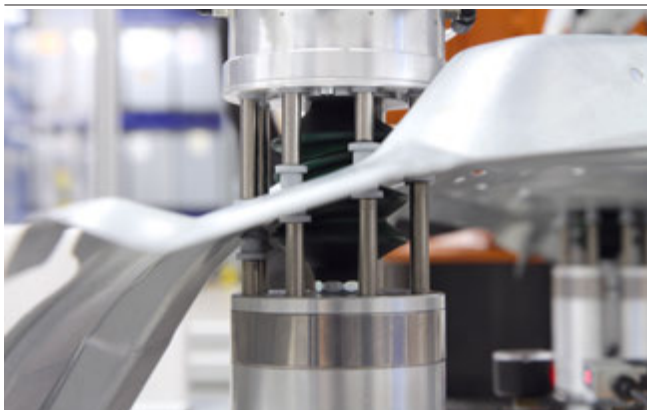
- Suction-Cup Balance SSCB for automated, precise gripping and clamping of various workpieces in a production line
- Ideal for securely gripping and clamping of uneven 3D free-form surfaces
- Mirrored gripping and clamping possible through precise mapping of the workpiece contour
- Driveless adjusting with no mechanical stops or positioning aids

Design



- Flexible bellows suction cup (1) for adapting perfectly to the workpiece
- Main body (2) made of aluminum
- Compressed air supply (3) for spring force
- Vacuum supply (4) for suction cup
- Compressed air supply (5) for releasing positioning pins, one for each pin
- Positioning pins (6) with padded tips that are gentle on the workpiece

System Design Suction-Cup Balance SSCB



Automated gripping and clamping with the Suction-Cup Balance SSCB

Our Highlights...

- End effector for precise workpiece positioning
- Software controlled 3D free-forms using 2D reference surfaces
- Individually lockable, unpressurized positioning pins
- Special supporting material on workpiece contact surfaces

Your Benefits...

- Flexible design of gripping and clamping systems
- Automated set-up process for gripping and clamping systems
- Automated adjustment to workpiece contours
- Reliable and precise fixation of complex parts

Suction-Cup Balance SSCB

Gripping area Ø 22 mm and 60 mm



Designation Code Suction-Cup Balance SSCB

SSCB	-	78	-	93.5-108	-	ZP	-	60
1		2		3		4		5

SAB	-	NBR
6		7

1 – Abbreviated designation

Code	Type
SSCB	Suction-Cup Balance

2 – Positioning pins

Code	Diameter in mm
30...78	ø 30 to 78

3 – Application

Code	Dimensions in mm
60.7-66.5... 141-171	60.7 to 171

4 – Fixing the positioning pins

Code	Type
EP	Individually fixed positioning pins
ZP	Centrally fixed positioning pins

5 – Connection

Code	Connection
M6-IG	M6-IG
60	60 mm Innospann mounting

6 – Suction cup

Code	Type
FSG	2.5 folds, round
SAB	1.5 folds, round

7 – Material Suction cup

Code	Material
VU1	VU1
NBR	Nitrile caoutchuc

The Suction-Cup Balance SSCB is delivered assembled. The delivery consists of:

- Suction-Cup Balance made of aluminium; with positioning pins
- Suction cups FSG-VU1 or SAB-NBR

Available spare parts: Suction cups (spare parts set), cover cap



Ordering Data Suction-Cup Balance SSCB

Type	Part no.
SSCB-30 60.7-66.5 ZP M4-IG SAB-NBR	10.01.41.00017
SSCB-78 93.5-107.5 ZP 60 SAB-NBR	10.01.15.00572
SSCB-78 141-171 EP M6-IG FSG-VU1	10.01.15.00850
SSCB-78 141-171 ZP M6-IG FSG-VU1	10.01.15.00922



Ordering Data Spare Parts Suction-Cup Balance SSCB

Type	Spare Parts	Part no.
SSCB-78 141-171 EP M6-IG FSG-VU1	Set of spare parts	ERS-SET SSCB-FG60-VU1
SSCB-78 141-171 ZP M6-IG FSG-VU1	Set of spare parts	ERS-SET SSCB-FG60-VU1

Type	Spare Parts	Part no.
SSCB-78 93.5-107.5 ZP 60 SAB-NBR	Cap (round)	KAPP 7x10.5 SSCB
SSCB-78 141-171 EP M6-IG FSG-VU1	Cap (round)	KAPP 7x10.5 SSCB
SSCB-78 141-171 ZP M6-IG FSG-VU1	Cap (round)	KAPP 7x10.5 SSCB



Suction-Cup Balance SSCB

Gripping area Ø 22 mm and 60 mm

Technical Data Suction-Cup Balance SSCB

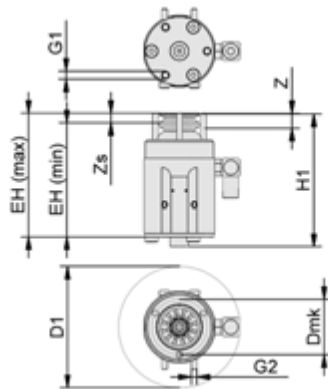
Type*	Material work-piece support	Suction cup type	Size	Material	Suction force [N]**	Pull-off force [N]***	Weight [g]
SSCB-30 60.7-66.5 ZP M4-IG SAB-NBR	A2	SAB	22	NBR	16	24	200
SSCB-78 93.5-107.5 ZP 60 SAB-NBR	NBR	SAB	60	NBR	82	130	1,300
SSCB-78 141-171 EP M6-IG FSG-VU1	NBR	FSG	60	VU1	61	100	2,598
SSCB-78 141-171 ZP M6-IG FSG-VU1	NBR	FSG	60	VU1	61	100	2,610

*Technical data and design data are max. values, actual values depend on application probably. We recommend that before handling, you would better to test every kind of workpiece. This is the only way to guarantee a safe handling process.

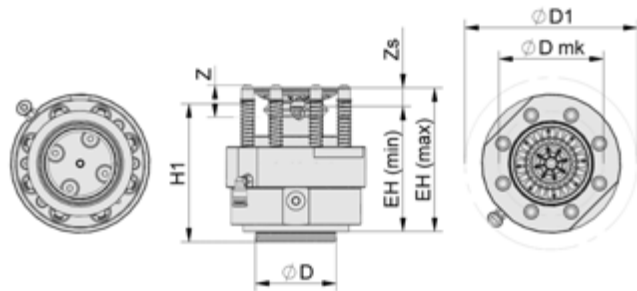
**Specifications are theoretical values at a -0.6 bar vacuum on dry, flat and even workpiece surfaces – they do not include safety factors.

***Specifications are theoretical values at a -0.6 bar vacuum on dry, flat and even workpiece surfaces – they do not include safety factors.

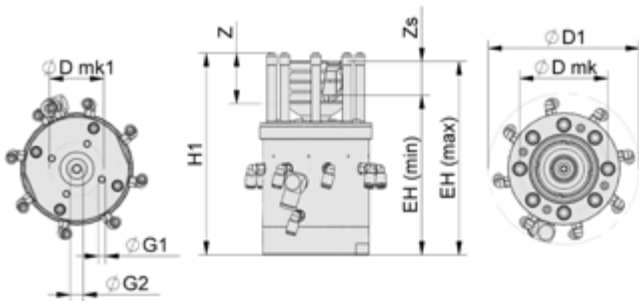
Design Data Suction-Cup Balance SSCB



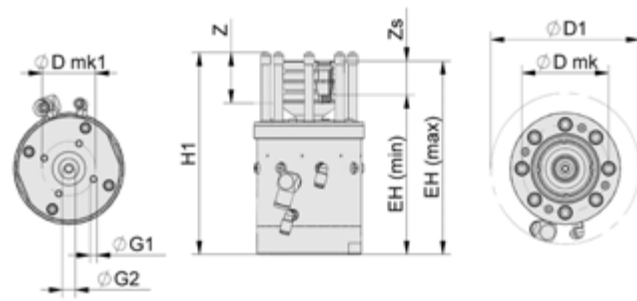
SSCB-30 ZP - SAB



SSCB-78 ZP - SAB



SSCB-78 EP - FSG



SSCB-78 ZP - FSG

Suction-Cup Balance SSCB

Gripping area Ø 22 mm and 60 mm



Design Data Suction-Cup Balance SSCB

Type	D [mm]	D1 [mm]	Dmk [mm]	D mk1 [mm]	EH (max) [mm]	EH (min) [mm]	G1	G2	H1 [mm]	Zs [mm]	Z (Stroke) [mm]
SSCB-30 60.7-66.5 ZP M4-IG SAB-NBR	-	66	30	-	67	61	M4-F	M3-M	72	6	8
SSCB-78 93.5-107.5 ZP 60 SAB-NBR	60	117	78	-	108	94	-	-	118	14	22
SSCB-78 141-171 EP M6-IG FSG-VU1	-	134	78	48	171	141	M6-F	G1/4"-F	179	30	46
SSCB-78 141-171 ZP M6-IG FSG-VU1	-	134	78	48	171	141	M6-F	G1/4"-F	179	30	46


Vacuum Generators






Overview of Section




At a Glance

Vacuum Generators for Wet Processing

		Page
	<p>Vacuum Unit VAGG</p> <ul style="list-style-type: none"> • Mobile vacuum generation and monitoring • Suction capacities of 6, 18, 40 and 63 m³/h 	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">  GLASS </div> <div style="margin-right: 10px;">  METAL </div> <div style="margin-right: 10px;">  </div> </div> <p>Mobile vacuum supply for wet machining in CNC machining centers.</p>

	<p>Vacuum Operation Center VOC</p> <ul style="list-style-type: none"> • Central vacuum generation and monitoring • Suction capacities of 40, 63, 100 m³/h 	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">  GLASS </div> <div style="margin-right: 10px;">  METAL </div> </div> <p>Stationary vacuum supply for wet machining in CNC machining centers with automatic liquid condenser.</p>
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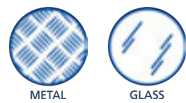
Vacuum Pumps

	<p>Dry-Running Vacuum Pumps EVE-TR</p> <ul style="list-style-type: none"> • Suction capacity up to 244 m³/h • Max. vacuum: 92 % 	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">  UNIVERSAL </div> <div style="margin-right: 10px;">  </div> </div> <p>Oil free vacuum pump with integrated fan, permanently lubricated bearings and high efficiency for handling of airtight parts.</p>
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Vacuum Unit VAGG



Suction capacities of 6, 18, 40 and 63 m³/h



Suitability for Industry Specific Applications

Applications

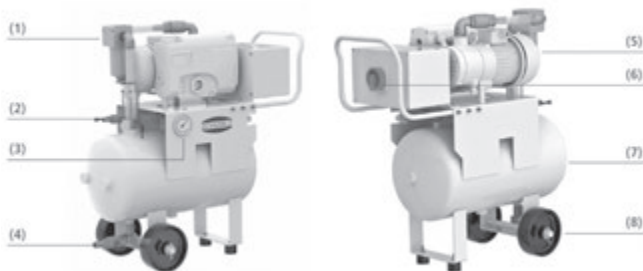
- Vacuum unit based on an oil-lubricated vacuum pump with vacuum and liquid reservoirs
- Simple and quick to install; ideal for end users who use vacuum as one of many clamping technologies
- Vacuum supply of several machines in rotation possible
- Visual and audible system monitoring
- Designed to be integrated in the machine control of the CNC machining center



Vacuum Unit VAGG

Design

- Drop separator (1) for separation of condensate
- Ball valve (2) for turning the vacuum on / off
- Vacuum gauge (manometer) (3) for visual vacuum inspection
- Drain valve (4) for manual drainage of liquid
- Vacuum pump (5) and power switch (6)
- Vacuum and liquid storage (7), as well as roles (8) for mobile use of VAGG



System Design Vacuum Unit VAGG

Our Highlights...

- Integrated manometer, vacuum switch, optical level indicator with electronic swimming switch and warning device
- Automatic emergency off function
- Digital output warns against loss of vacuum and critical fluid level during the machining

Your Benefits...

- Visible and audible monitoring of the vacuum level and the fluid level
- Protects the pump against drawn-in fluids
- Due to synchronization with machine control the machining will be stopped in case of loss of clamping force



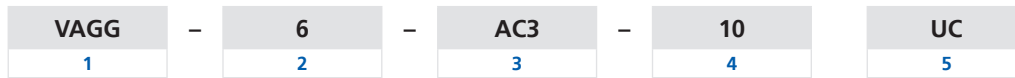
Vacuum unit VAGG for vacuum generation in wet machining

Vacuum Unit VAGG

Suction capacities of 6, 18, 40 and 63 m³/h



Designation Code Vacuum Unit VAGG



1 – Abbreviated designation

Code	Version
VAGG	Vacuum unit

2 – Performance class

Code	Suction rate in m ³ /h
6...63	6 to 63

3 – Current Type

Code	Type
AC3	Three-phase

4 – Vacuum / Liquid reservoir

Code	Volume in l
10...80	10 to 80

5 – Product addition

Code	Certification
UC	UL / CSA certified

The vacuum unit VAGG is supplied as a ready-to-connect product.

Available spare parts: Vacuum gauge, oil, water separator, spare part, accessories, vacuum pump, wearing parts kit

Available accessories: Vacuum hose



Ordering Data Vacuum Unit VAGG

Type	Part no.
VAGG 6 AC3 10	10.01.27.00120
VAGG 6 AC3 10 UC	10.01.27.00798
VAGG 18 AC3 30	10.01.27.00121
VAGG 18 AC3 30 UC	10.01.27.00799
VAGG 40 AC3 80	10.01.27.00122
VAGG 40 AC3 80 UC	10.01.27.00800
VAGG 63 AC3 80	10.01.27.00123
VAGG 63 AC3 80 UC	10.01.27.00801



Ordering Data Spare Parts Vacuum Unit VAGG

Type	Spare part	Vacuum gauge	Water separator	Oil
VAGG	10.01.27.01456	10.07.02.00016	10.07.01.00303	27.02.01.00055

Type	Spare Parts	Part no.
VAGG 6	Accessories	ZUB BEL für EVE-OG-6-AC3
VAGG 18	Accessories	ZUB BEL für EVE-OG-18-AC3
VAGG 40	Accessories	ZUB BEL für EVE-OG-40-AC3
VAGG 63	Accessories	ZUB BEL

Type	Spare Parts	Part no.
VAGG 6 AC3 10	Vacuum pump	EVE-OG-6-AC3
VAGG 6 AC3 10 UC	Vacuum pump	EVE-OG-6-AC3
VAGG 18 AC3 30	Vacuum pump	EVE-OG-18-AC3
VAGG 18 AC3 30 UC	Vacuum pump	EVE-OG-18-AC3
VAGG 40 AC3 80	Vacuum pump	EVE-OG-40-AC3
VAGG 40 AC3 80 UC	Vacuum pump	EVE-OG-40-AC3



Vacuum Unit VAGG



Suction capacities of 6, 18, 40 and 63 m³/h



Ordering Data Spare Parts Vacuum Unit VAGG

Type	Spare Parts		Part no.
VAGG 63 AC3 80	Vacuum pump	EVE-OG-63-AC3	10.03.02.00073
VAGG 63 AC3 80 UC	Vacuum pump	EVE-OG-63-AC3	10.03.02.00087

Type	Spare Parts		Part no.
VAGG 40 AC3 80	Set of parts subject to wear pump	VST EVE-OG-25-40	10.03.02.00060
VAGG 63 AC3 80	Set of parts subject to wear pump	VST EVE-OG-63-100	10.03.02.00055



Ordering Data Accessories Vacuum Unit VAGG

Type	Accessories		Part no.
VAGG 6 AC3 10	Vacuum hose	VSL 21-12 PVC-G	10.07.09.00006
VAGG 6 AC3 10 UC	Vacuum hose	VSL 21-12 PVC-G	10.07.09.00006
VAGG 18 AC3 30	Vacuum hose	VSL 21-12 PVC-G	10.07.09.00006
VAGG 18 AC3 30 UC	Vacuum hose	VSL 21-12 PVC-G	10.07.09.00006
VAGG 40 AC3 80	Vacuum hose	VSL 33-25 PVC-DS	10.07.09.00041
VAGG 40 AC3 80 UC	Vacuum hose	VSL 33-25 PVC-DS	10.07.09.00041
VAGG 63 AC3 80	Vacuum hose	VSL 33-25 PVC-DS	10.07.09.00041
VAGG 63 AC3 80 UC	Vacuum hose	VSL 33-25 PVC-DS	10.07.09.00041



Technical Data Vacuum Unit VAGG

Type	Weight [kg]	Reservoir volume [l]	Suction rate (max.) [m ³ /h]	Voltage 50 Hz	Voltage 60 Hz	Rated power 50 Hz [kW]	Rated power 60 Hz [kW]	Protection type IP
VAGG 6 AC3 10	30	10	6	400V - AC3 V	-	0.25	-	IP 54
VAGG 6 AC3 10 UC	30	10	6	-	460V - 3-phase AC V	-	0.30	IP 54
VAGG 18 AC3 30	48	30	18	400V - AC3 V	-	0.56	-	IP 54
VAGG 18 AC3 30 UC	49	30	18	-	460V - 3-phase AC V	-	0.66	IP 54
VAGG 40 AC3 80	85	80	40	400V - AC3 V	-	1.40	-	IP 54
VAGG 40 AC3 80 UC	86	80	40	-	460V - 3-phase AC V	-	0.73	IP 54
VAGG 63 AC3 80	100	80	63	400V - AC3 V	-	2.00	-	IP 54
VAGG 63 AC3 80 UC	100	80	63	-	460V - 3-phase AC V	-	2.40	IP 54

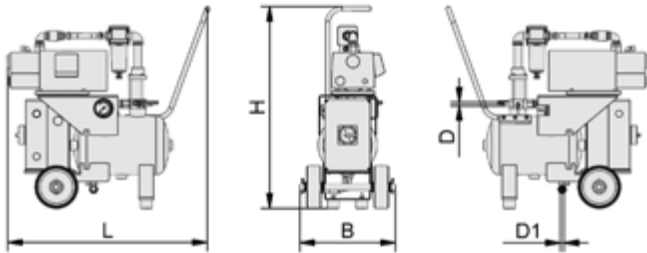


Vacuum Unit VAGG

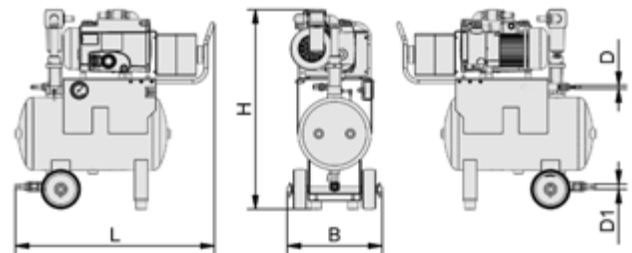
Suction capacities of 6, 18, 40 and 63 m³/h



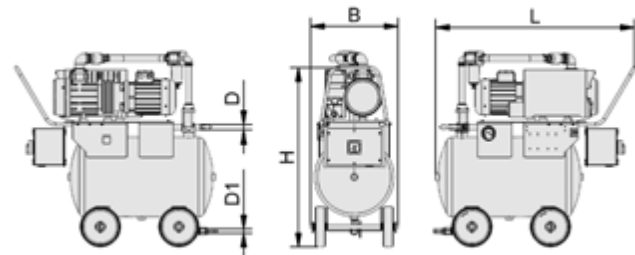
Design Data Vacuum Unit VAGG



VAGG 6



VAGG 18



VAGG 40 - VAGG 63

Type	B [mm]	D [mm]	D1 [mm]	H [mm]	L [mm]
VAGG 6 AC3 10	250	12	12	600	55
VAGG 6 AC3 10 UC	250	12	12	600	55
VAGG 18 AC3 30	350	12	12	650	700
VAGG 18 AC3 30 UC	350	12	12	650	700
VAGG 40 AC3 80	500	25	25	850	800
VAGG 40 AC3 80 UC	500	25	25	850	800
VAGG 63 AC3 80	500	25	25	850	800
VAGG 63 AC3 80 UC	500	25	25	850	800

Vacuum Operation Center VOC

Suction capacities of 40, 63 and 100 m³/h



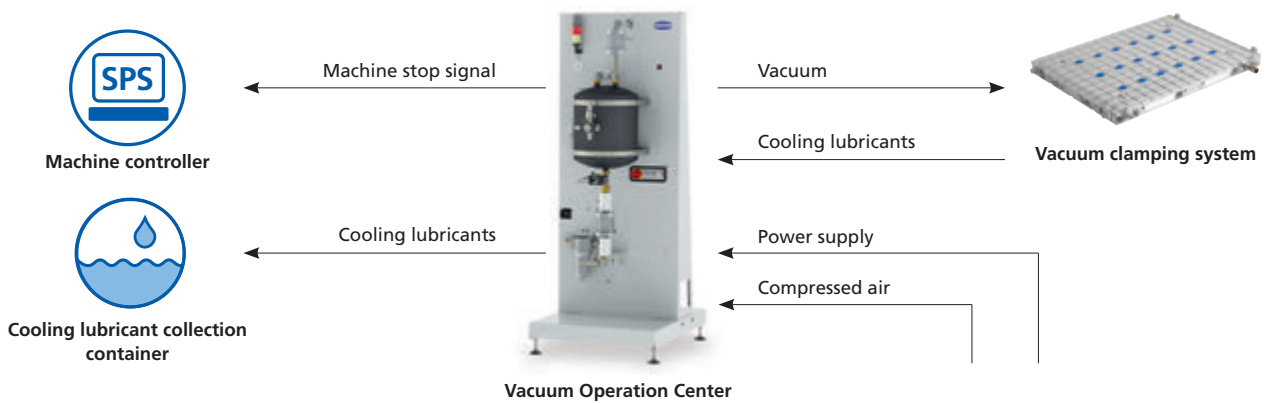
Vacuum Operation Center VOC for vacuum generation in wet working conditions

Central vacuum management for uninterrupted CNC machining

The vacuum generation contributes significantly to process reliability when clamping workpieces on CNC machining centers with vacuum.

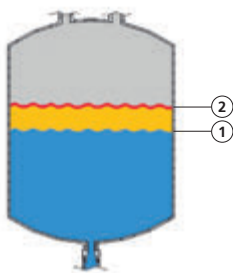
Schmalz has developed the Vacuum Operation Center VOC especially for the requirements of metal and glass processing. A complete, ready-to-connect stationary system for the evacuation of gaseous media containing liquids. The automatic fill level monitoring and liquid recirculation allows continuous processing without interruption.

Interfaces and Function



Automatic fill level monitoring

A fill level sensor continuously monitors the liquid level in the reservoir. Signal lamps and a horn provide visual and audible monitoring to warn of critical system states.

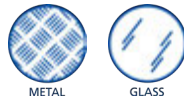


- ① **Critical fill level reached**
 - Yellow signal lamp flashes
 - Horn sounds
- ② **Maximum fill level reached**
 - Access to clamping system closes to protect the vacuum pump
 - Red signal lamp remains illuminated
 - Horn stops

Vacuum Operation Center VOC



Suction capacities of 40, 63 and 100 m³/h



Suitability for Industry Specific Applications



Vacuum Operation Center VOC

Applications

- Vacuum Operation Center VOC as a complete system ready to connect
- Specifically for evacuation of gaseous media containing liquids
- Liquid sucked in, such as cooling lubricants are separated and automatically returned to the machining cycle
- Audible, visual and electronic system monitoring for maximum security and control in standard machine operation
- Designed to be integrated in the machine control of the CNC machining center
- Three-shift and continuous operation possible, without interruption of processing



System Design Vacuum Operation Center VOC

Design

- Signal lamps and audible alarm sounds (1) and vacuum gauge (2) for vacuum level in reservoir
- Vacuum and liquid reservoir (3)
- Interface for automatic liquid recirculation (4)
- Water separator (5) for separation of remaining liquid
- Vacuum switch (6) with digital or analog output for the control; control panel (7) of self-sufficient execution
- Base frame (8) with rear-mounted vacuum pump (9)



Vacuum Operation Center VOC for vacuum generation in wet working conditions

Our Highlights...

- Automatic return of aspirated liquid to the machine's circulation
- Vacuum and fill level monitoring
- Integration of sensor and control signals into the machine controls via machine manufacturer possible

Your Benefits...

- Uninterrupted machining even of large parts
- Maximum process control and transparency
- Automatic monitoring and operation of the vacuum unit via the machine panel

Vacuum Operation Center VOC

Suction capacities of 40, 63 and 100 m³/h



Designation Code Vacuum Operation Center VOC

VOC	-	AD	-	S	-	63		A
1		2		3		4		5

1 – Abbreviated designation

Code	Version
VOC	Vacuum Operation Center

2 – Function

Code	Version
AD	Automatic emptying

3 – Type of control

Code	Version
S	SPS controlled

4 – Performance class

Code	Suction rate in m ³ /h
40...100	40 to 100

5 – Product addition

Code	Operation mode
A	Self sufficient

The Vacuum Operation Center is supplied as a ready-to-connect product.

Available spare parts: Proximity switch, vacuum gauge, filter insert, sieve insert, oil, pinch valve, accessories, vacuum pump



Ordering Data Vacuum Operation Center VOC

Type	Part no.
VOC-AD-S-40-A	10.01.27.00659
VOC-AD-S-63-A	10.01.27.00676
VOC-AD-S-100-A	10.01.27.00678



Ordering Data Spare Parts Vacuum Operation Center VOC

Type		Part no.
Proximity switch	NAEH-SCHA 24V-DC	21.01.09.00060
Vacuum gauge	VAM 67 V H-SE	10.07.02.00016
Filter insert (round)	FILT-EINS 77x90 PE WAS-ABS	10.07.01.00310
Sieve insert	SIEB-EINS 30x 67 VC-SYS	10.01.27.00371
Oil	OEL EVE-OG 1L ANDEROL 555	27.02.01.00055
Pinch valve	QV G3/8-IG	10.05.06.00085
Pinch valve	QV G1-IG	10.05.06.00086

Type	Spare Parts	Part no.
VOC-AD-S-40-A	Accessories	ZUB BEL for EVE-OG-40-AC3
VOC-AD-S-63-A	Accessories	ZUB BEL
VOC-AD-S-100-A	Accessories	ZUB BEL

Type	Spare Parts	Part no.
VOC-AD-S-40-A	Vacuum pump	EVE-OG 40 AC3 AQUA IE2
VOC-AD-S-63-A	Vacuum pump	EVE-OG 63 AC3 IE2
VOC-AD-S-100-A	Vacuum pump	EVE-OG 100 AC3 AQUA IE2

Vacuum Operation Center VOC

Suction capacities of 40, 63 and 100 m³/h

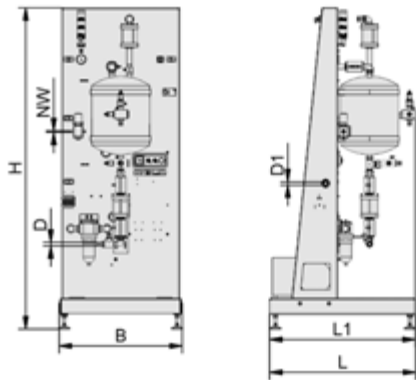


Technical Data Vacuum Operation Center VOC

Type	Reservoir volume [l]	Voltage 50 Hz	Rated power 50 Hz [kW]	Protection type IP	Suction rate (max.) [m ³ /h]	Weight [kg]
VOC-AD-S-40-A	60	400V - AC3 V	1.4	IP 54	40	230
VOC-AD-S-63-A	60	400V - AC3 V	2.0	IP 54	63	250
VOC-AD-S-100-A	60	400V - AC3 V	2.7	IP 54	100	260



Design Data Vacuum Operation Center VOC



VOC

Type	B [mm]	D [mm]	D1 [mm]	H [mm]	L [mm]	L1 [mm]	NW [mm]
VOC-AD-S-40-A	840	25	25	2,200	1,000	995	7.2
VOC-AD-S-63-A	840	25	25	2,200	1,000	995	7.2
VOC-AD-S-100-A	840	25	25	2,200	1,000	995	7.2

Dry-Running Vacuum Pumps EVE-TR

Suction rate from 2.3 m³/h to 250 m³/h



Suitability for Industry Specific Applications



Dry-Running Vacuum Pumps EVE-TR

Applications

- Vacuum pump for universal use in a wide range of different applications in the sector of manual and automatic handling
- Handling of airtight workpieces
- Rapid evacuation of vacuum systems
- Mobile use for picking up and clamping workpieces (EVE-TR-T)

Design

- Dry-running vacuum pump, with or without additional filter
- Available in versions for single phase AC, three phase AC or DC power supplies
- Available as a multi cell compressor with very little vibration and constant output or as a compact diaphragm pump
- Compact design with integrated cooling fan and permanently lubricated bearings
- Mounting holes with integrated damping elements
- To be preferably mounted with the motor shaft horizontal

Our Highlights...

- Dry-running (oil free) vacuum pump
- Multi cell compression principle of the rotary vane pumps
- Permanently lubricated bearings and powerful cooling fan
- Wide range of models with various outputs
- Dry-running rotary vane pump with excellent efficiency

Your Benefits...

- Robust and requiring little maintenance
- Vibration-free operation and continuous output with little pulsation
- Excellent heat dissipation
- Suction capacity adaptable to meet customer requirements
- Low current consumption, economical continuous operation

Dry-Running Vacuum Pumps EVE-TR

Suction rate from 2.3 m³/h to 250 m³/h



Designation Code Dry-Running Vacuum Pumps EVE-TR



1 – Abbreviated designation

Code	Version
EVE	EVE

2 – Pump type

Code	Type
TR	Dry-running
TR-M	Diaphragm pump
TR-T	Transportable

3 – Performance class

Code	Suction rate in m ³ /h
2.3...250	2.3 to 250

4 – Supply voltage

Code	Type
AC	Single phase
AC3	Three phase
DC	Direct current
12V-DC	
24V-DC	

5 – Motor type

Code	Region
IE3-TYP1	EU/CN/IND
IE3-TYP2	US/CAN

6 – Product addition

Code	Type
F	Additional filter

The vacuum pump EVE-TR comes ready to connect.

Available spare parts: Filter insert, wearing part set

Available accessories: Vacuum limiter valve



Ordering Data Dry-Running Vacuum Pumps EVE-TR

Type	Part no.
EVE-TR-M 2.3 24V-DC	10.03.01.00192
EVE-TR-M 2.3 12V-DC	10.03.01.00195
EVE-TR 4 AC	10.03.01.00120
EVE-TR 4 AC F	10.03.01.00114
EVE-TR 4 AC3	10.03.01.00111
EVE-TR 4 AC3 F	10.03.01.00113
EVE-TR-T 4 AC F	10.03.01.00197
EVE-TR 8 AC	10.03.01.00121
EVE-TR 8 AC F	10.03.01.00117
EVE-TR 8 AC3	10.03.01.00112
EVE-TR 8 AC3 F	10.03.01.00116
EVE-TR 8 DC	10.03.01.00288
EVE-TR 8 24V-DC F	10.03.01.00401
EVE-TR 10 AC	10.03.01.00138
EVE-TR 10 AC F	10.03.01.00144
EVE-TR 10 AC3	10.03.01.00137
EVE-TR 10 AC3 F	10.03.01.00143
EVE-TR 16 AC	10.03.01.00140
EVE-TR 16 AC F	10.03.01.00146
EVE-TR 16 AC3	10.03.01.00139
EVE-TR 16 AC3 F	10.03.01.00145



Suction rate from 2.3 m³/h to 250 m³/h

Ordering Data Dry-Running Vacuum Pumps EVE-TR

Type	Part no.
EVE-TR 25 AC3	10.03.01.00141
EVE-TR 25 AC3 F	10.03.01.00147
EVE-TR 25 AC3 IE3-TYP2	10.03.01.00349
EVE-TR 25 AC3 IE3-TYP2 F	10.03.01.00353
EVE-TR 40 AC3	10.03.01.00142
EVE-TR 40 AC3 F	10.03.01.00148
EVE-TR 40 AC3 IE3-TYP2	10.03.01.00350
EVE-TR 40 AC3 IE3-TYP2 F	10.03.01.00354
EVE-TR 60 AC3 IE3-TYP1	10.03.01.00319
EVE-TR 60 AC3 IE3-TYP1 F	10.03.01.00335
EVE-TR 60 AC3 IE3-TYP2	10.03.01.00320
EVE-TR 60 AC3 IE3-TYP2 F	10.03.01.00336
EVE-TR 80 AC3 IE3-TYP1	10.03.01.00321
EVE-TR 80 AC3 IE3-TYP1 F	10.03.01.00337
EVE-TR 80 AC3 IE3-TYP2	10.03.01.00322
EVE-TR 80 AC3 IE3-TYP2 F	10.03.01.00338
EVE-TR 100 AC3 IE3-TYP1	10.03.01.00323
EVE-TR 100 AC3 IE3-TYP1 F	10.03.01.00339
EVE-TR 100 AC3 IE3-TYP2	10.03.01.00324
EVE-TR 100 AC3 IE3-TYP2 F	10.03.01.00340
EVE-TR 140 AC3 IE3-TYP1	10.03.01.00325
EVE-TR 140 AC3 IE3-TYP1 F	10.03.01.00341
EVE-TR 140 AC3 IE3-TYP2	10.03.01.00326
EVE-TR 140 AC3 IE3-TYP2 F	10.03.01.00342
EVE-TR 250 AC3 IE3-TYP2 F	10.03.01.00328
EVE-TR 250 AC3 IE3-TYP1 F	10.03.01.00327



Ordering Data Spare Parts Dry-Running Vacuum Pumps EVE-TR

Type	Spare Parts	Part no.	
EVE-TR 4	Set of parts subject to wear pump	VST EVE-TR-4	10.03.01.00108
EVE-TR 8	Set of parts subject to wear pump	VST EVE-TR-8	10.03.01.00109
EVE-TR 10	Set of parts subject to wear pump	VST EVE-TR-10	10.03.01.00132
EVE-TR 16	Set of parts subject to wear pump	VST EVE-TR-16	10.03.01.00133
EVE-TR 25	Set of parts subject to wear pump	VST EVE-TR-25	10.03.01.00134
EVE-TR 40	Set of parts subject to wear pump	VST EVE-TR-40	10.03.01.00135
EVE-TR 60	Set of parts subject to wear pump	VST EVE-TR60/TR80	22.09.01.00031
EVE-TR 80	Set of parts subject to wear pump	VST EVE-TR60/TR80	22.09.01.00031
EVE-TR 100	Set of parts subject to wear pump	VST EVE-TR-100	22.09.01.00033
EVE-TR 140	Set of parts subject to wear pump	VST EVE-TR-140	22.09.01.00035
EVE-TR 250	Set of parts subject to wear pump	VST EVE-TR-360	10.03.01.00187

Type	Spare Parts	Part no.	
EVE-TR 4	Filter insert (round)	FILT-EINS 15 27x23 A2 VF-1/4-wire	10.07.01.00013
EVE-TR 8	Filter insert (round)	FILT-EINS 10 28x51 PAP VF-3/8	10.07.01.00014
EVE-TR 10	Filter insert (round)	FILT-EINS 3 65x70 PAP STF-3/4-IG	10.07.01.00017
EVE-TR 16	Filter insert (round)	FILT-EINS 3 65x70 PAP STF-3/4-IG	10.07.01.00017



Dry-Running Vacuum Pumps EVE-TR

Suction rate from 2.3 m³/h to 250 m³/h



Ordering Data Spare Parts Dry-Running Vacuum Pumps EVE-TR

Type	Spare Parts			Part no.
EVE-TR 25	Filter insert (round)	FILT-EINS 3 65x70 PAP STF-3/4-IG		10.07.01.00017
EVE-TR 40	Filter insert (round)	FILT-EINS 3 98x70 PAP STF-1-1/4-IGN		10.07.01.00018
EVE-TR 60	Filter insert (round)	FILT-EINS 3 98x70 PAP STF-1-1/4-IGN		10.07.01.00018
EVE-TR 80	Filter insert (round)	FILT-EINS 3 98x70 PAP STF-1-1/4-IGN		10.07.01.00018
EVE-TR 100	Filter insert (round)	FILT-EINS 3 98x70 PAP STF-1-1/4-IGN		10.07.01.00018
EVE-TR 140	Filter insert (round)	FILT-EINS 3 98x70 PAP STF-1-1/4-IGN		10.07.01.00018



Ordering Data Accessories Dry-Running Vacuum Pumps EVE-TR

Type	Accessories			Part no.
EVE-TR 4	Vacuum limiter valve	VBV -850...0 G3/8-AG EVE 4-8		10.03.01.00107
EVE-TR 8	Vacuum limiter valve	VBV -850...0 G3/8-AG EVE 4-8		10.03.01.00107
EVE-TR 10	Vacuum limiter valve	VBV -950...0 G1-AG EVE 10-40		10.03.01.00136
EVE-TR 16	Vacuum limiter valve	VBV -950...0 G1-AG EVE 10-40		10.03.01.00136
EVE-TR 25	Vacuum limiter valve	VBV -950...0 G1-AG EVE 10-40		10.03.01.00136
EVE-TR 40	Vacuum limiter valve	VBV -950...0 G1-AG EVE 10-40		10.03.01.00136
EVE-TR 80	Vacuum limiter valve	VBV -950...0 G1-1/4-AG EVE 80-140		10.03.01.00153
EVE-TR 100	Vacuum limiter valve	VBV -950...0 G1-1/4-AG EVE 80-140		10.03.01.00153
EVE-TR 140	Vacuum limiter valve	VBV -950...0 G1-1/4-AG EVE 80-140		10.03.01.00153



Technical Data Dry-Running Vacuum Pumps EVE-TR

Type*	Vacuum (50 Hz) [mbar]	Suction rate DC [m ³ /h]	Suction rate (50 Hz) [m ³ /h]	Suction capa- city (60 Hz) [m ³ /h]	Voltage	Protection type IP	Weight [kg]	Sound level at 50 Hz [dB(A)]
EVE-TR-M 2.3 12V-DC	-	2.0	-	-	12V - DC V	-	2.4	78
EVE-TR-M 2.3 24V-DC	-	2.0	-	-	24V - DC V	-	2.4	72
EVE-TR 4 AC	-850	-	4.1	4.7	-	IP 54	7.0	59
EVE-TR 4 AC3	-850	-	4.1	4.7	-	IP 54	7.0	59
EVE-TR-T 4 AC F	-	-	4.0	4.7	-	IP 54	8.5	59
EVE-TR 8 AC	-850	-	7.6	8.7	-	IP 54	11.5	58
EVE-TR 8 AC3	-850	-	7.6	8.7	-	IP 54	11.5	58
EVE-TR 8 DC	-	9.7	-	-	24V - DC V	-	12.0	61
EVE-TR 10 AC	-850	-	10.0	12.0	-	IP 54	16.0	60
EVE-TR 10 AC3	-850	-	10.0	12.0	-	IP 54	16.0	60
EVE-TR 16 AC	-850	-	16.0	19.0	-	IP 54	22.4	61
EVE-TR 16 AC3	-850	-	16.0	19.0	-	IP 54	22.4	61
EVE-TR 25 AC3	-850	-	25.0	30.0	-	IP 54	26.0	62
EVE-TR 40 AC3	-850	-	40.0	48.0	-	IP 55	38.5	67
EVE-TR 60 AC3 IE3-TYP1	-900	-	55.0	66.0	-	IP 55	76.0	71
EVE-TR 80 AC3 IE3-TYP1	-900	-	67.0	78.5	-	IP 55	78.0	72
EVE-TR 100 AC3 IE3-TYP1	-900	-	98.0	112.0	-	IP 55	100.0	75
EVE-TR 140 AC3 IE3-TYP1	-900	-	129.0	154.0	-	IP 55	112.0	76
EVE-TR 250 AC3 F	-800	-	244.0	286.0	-	IP 55	222.0	77

*Specifications for 230 V / 230 V or 400 V

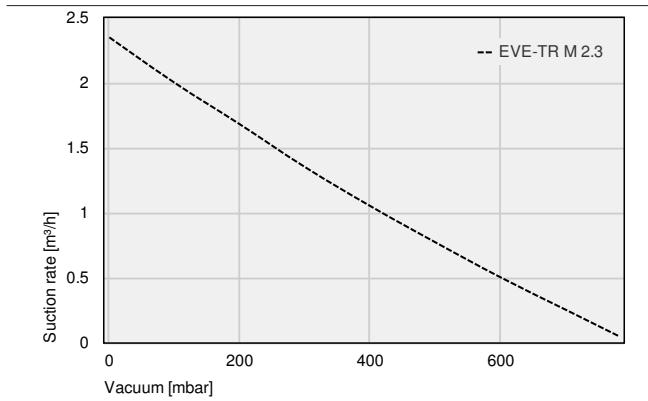
Dry-Running Vacuum Pumps EVE-TR



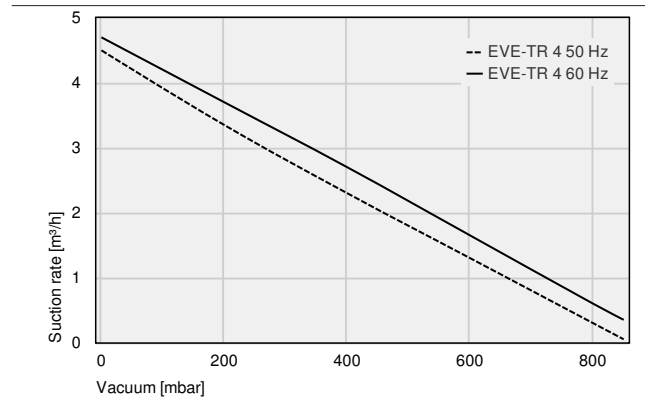
Suction rate from 2.3 m³/h to 250 m³/h



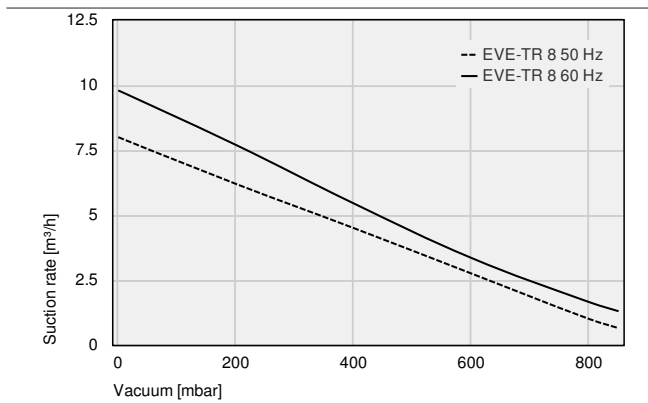
Performance Data Dry-Running Vacuum Pumps EVE-TR



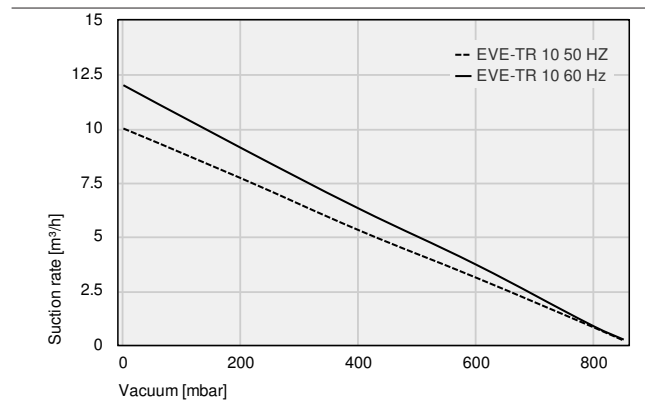
Suction capacity at various degrees of evacuation



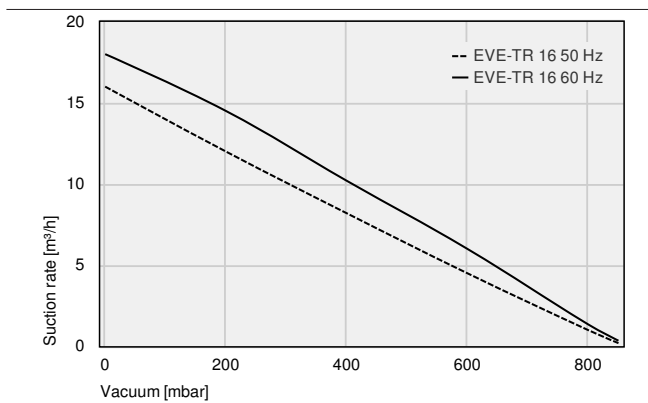
Suction capacity at various degrees of evacuation



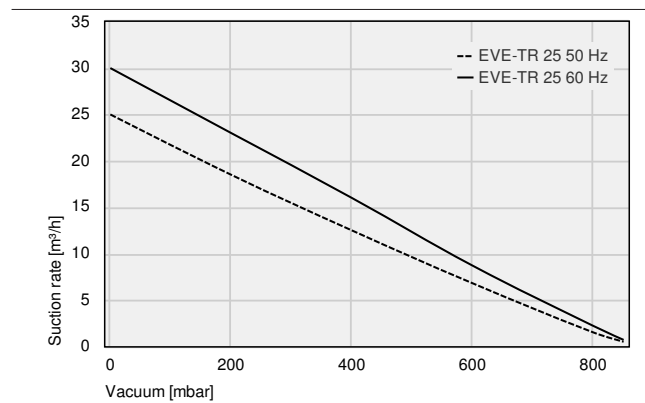
Suction capacity at various degrees of evacuation



Suction capacity at various degrees of evacuation



Suction capacity at various degrees of evacuation



Suction capacity at various degrees of evacuation

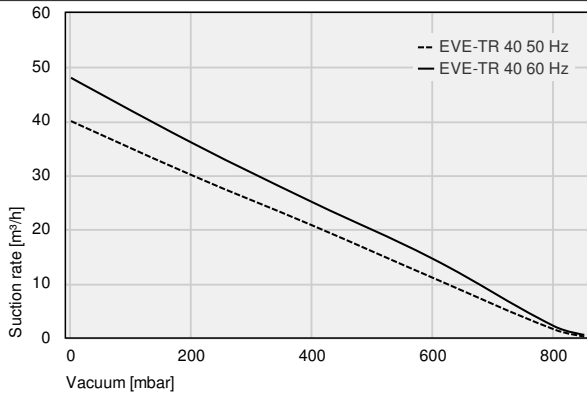
Dry-Running Vacuum Pumps EVE-TR



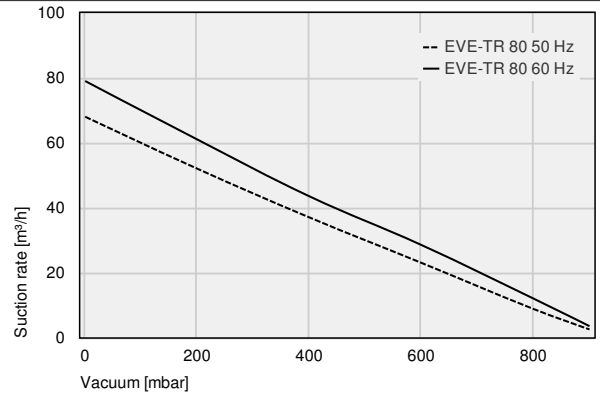
Suction rate from 2.3 m³/h to 250 m³/h



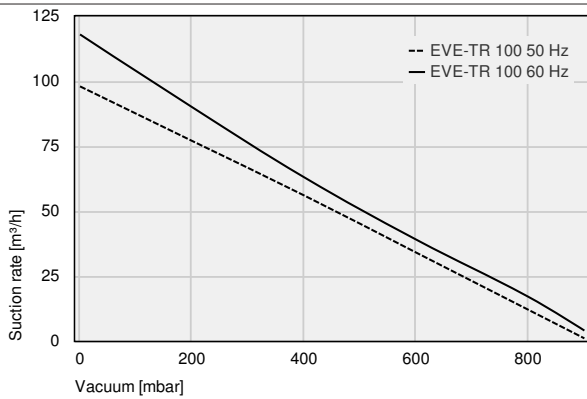
Performance Data Dry-Running Vacuum Pumps EVE-TR



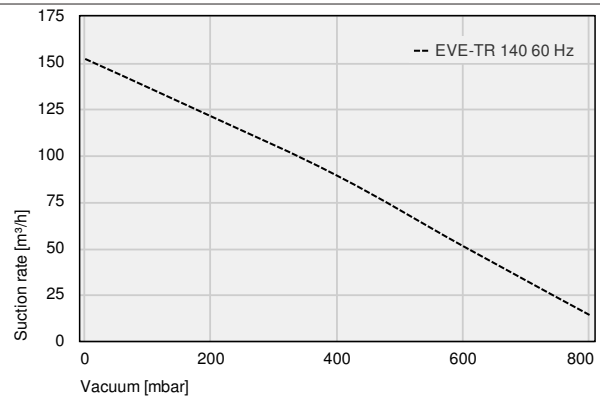
Suction capacity at various degrees of evacuation



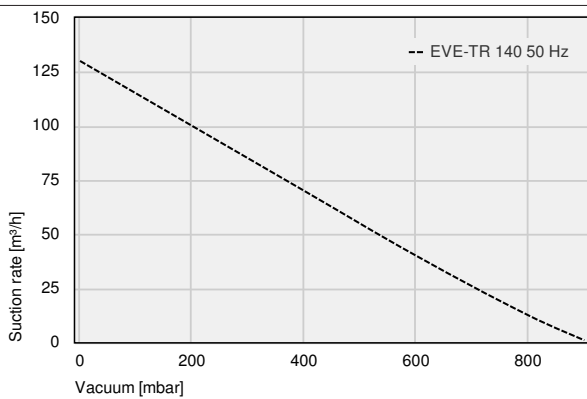
Suction capacity at various degrees of evacuation



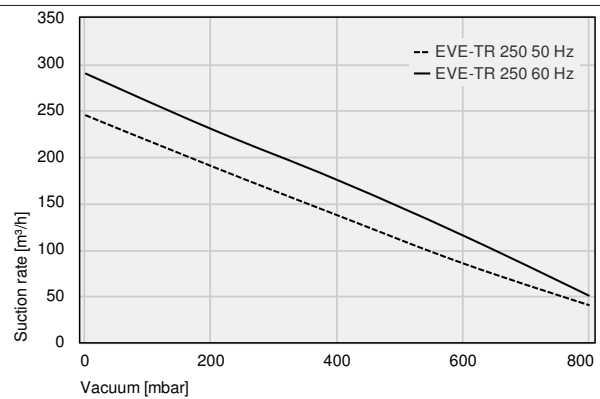
Suction capacity at various degrees of evacuation



Suction capacity at various degrees of evacuation



Suction capacity at various degrees of evacuation



Suction capacity at various degrees of evacuation

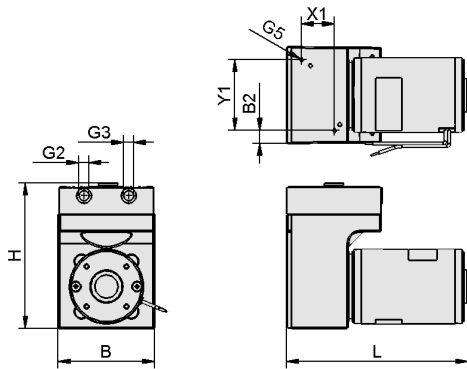
Dry-Running Vacuum Pumps EVE-TR



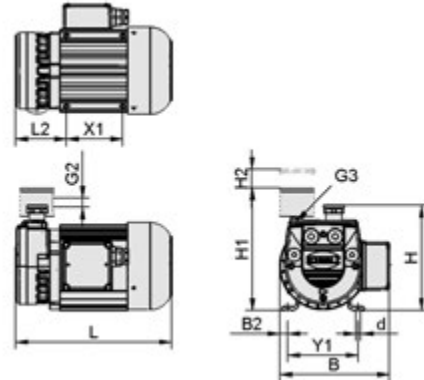
Suction rate from 2.3 m³/h to 250 m³/h



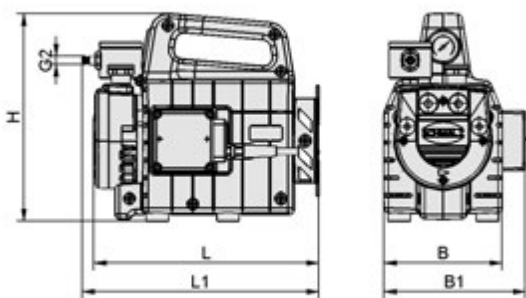
Design Data Dry-Running Vacuum Pumps EVE-TR



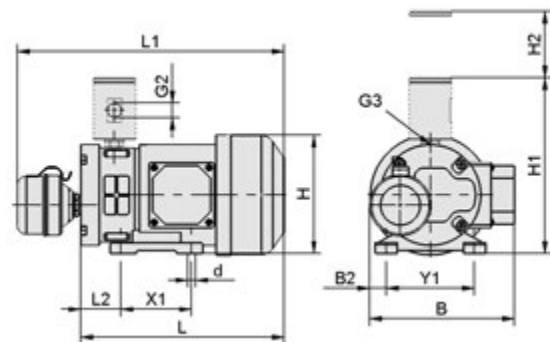
EVE-TR-M 2.3



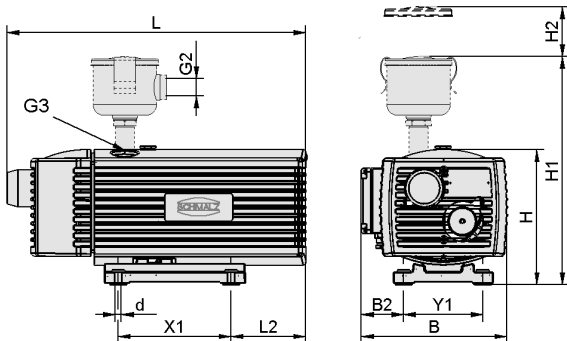
EVE-TR 4 - 8 (F)



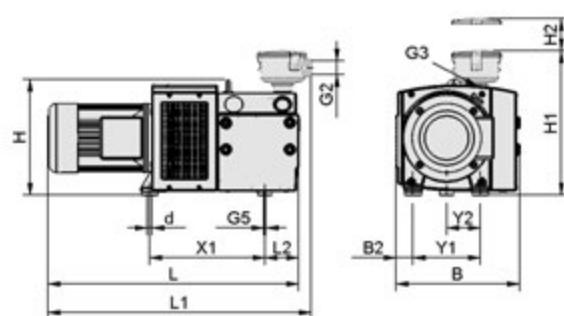
EVE-TR-T



EVE-TR 8 DC (F)



EVE-TR 10 - 40 (F)



EVE-TR 80 - 140 (F)



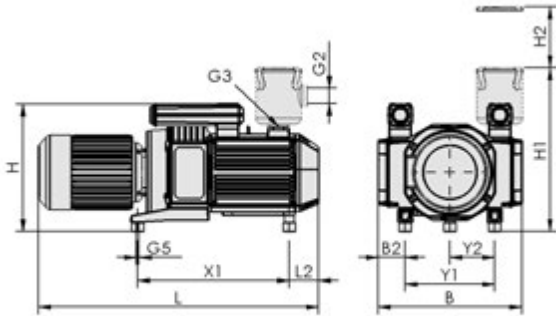
Dry-Running Vacuum Pumps EVE-TR



Suction rate from 2.3 m³/h to 250 m³/h



Design Data Dry-Running Vacuum Pumps EVE-TR



EVE-TR 250

Type	B	B2	d	G2	G3	G5	H	H1	H2	L	L1	L2	X1	Y1	Y2		
	[mm]	[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		
EVE-TR 3	-	-	82	11	-	G1/8"-F	G1/8"-F	M4-F	123	-	-	154	-	-	28	60	-
EVE-TR 4	AC3	-	155	12	7	-	G1/4-F	-	148	-	-	222	-	72	80	100	-
EVE-TR 4	AC	F	155	12	7	G1/4-F	G1/4-F	-	148	172	41	222	-	72	80	100	-
EVE-TR 4	AC	F	134	-	-	G1/4"-M	-	-	235	-	-	255	269	-	-	-	-
EVE-TR 8	AC	-	155	12	7	-	G3/8-F	-	172	-	-	251	-	80	80	100	-
EVE-TR 8	AC	F	155	12	7	G3/8-F	G3/8-F	-	154	201	62	251	-	80	80	100	-
EVE-TR 8	AC3	F	155	12	7	G3/8-F	G3/8-F	-	154	201	62	231	-	80	80	100	-
EVE-TR 8	DC	-	136	8	9	-	G3/8"-F	-	196	-	-	231	-	72	80	100	-
EVE-TR 10	AC3	-	206	60	7	-	G1/2-F	-	195	-	-	429	-	106	160	112	-
EVE-TR 10	AC3	F	206	60	7	G3/4-F	G1/2-F	-	198	325	70	429	-	106	160	112	-
EVE-TR 16	AC	-	231	66	7	-	G1/2-F	-	211	-	-	452	-	73	202	125	-
EVE-TR 16	AC	F	231	66	7	G3/4-F	G1/2-F	-	214	345	70	452	-	73	202	125	-
EVE-TR 25	AC3	-	260	40	7	-	G3/4"-F	-	290	-	-	505	-	96	220	190	-
EVE-TR 25	AC3	F	260	40	7	G3/4"-F	G3/4"-F	-	293	380	70	505	-	96	220	208	-
EVE-TR 40	AC3	-	280	51	7	-	G3/4"-F	-	290	-	-	572	-	131	220	190	-
EVE-TR 40	AC3	F	280	51	7	G1-1/4"-F	G3/4"-F	-	293	425	70	572	-	131	220	190	-
EVE-TR 60	AC3	-	353	46	12	-	G1"-F	M8-F	328	-	-	704	-	96	326	190	95
EVE-TR 60	AC3	F	353	46	12	G1-1/4"-F	G1"-F	M8-F	328	415	75	704	727	96	326	190	95
EVE-TR 80	AC3	-	353	48	12	-	G1"-F	M8-F	328	-	-	709	-	96	326	190	95
EVE-TR 80	AC3	F	353	48	12	G1-1/4"-F	G1"-F	M8-F	328	420	75	709	745	96	326	190	95
EVE-TR 100	AC3	-	470	110	12	-	G1-1/2"-F	M8-F	336	-	-	835	-	140	398	245	123
EVE-TR 100	AC3	F	470	110	12	G1-1/4"-F	G1-1/2"-F	M8-F	336	466	75	835	890	140	398	245	123
EVE-TR 140	AC3	-	470	110	12	-	G1-1/2"-F	M8-F	336	-	-	873	-	140	398	245	123
EVE-TR 140	AC3	F	470	110	12	G1-1/4"-F	G1-1/2"-F	M8-F	336	437	75	873	851	140	398	245	123
EVE-TR 250	AC3	F	644	116	-	-	G2-1/2"-F	M10-F	530	-	-	1,059	-	124	645	380	190

General Terms and Conditions of Sale and Delivery and Imprint

VACUUM AUTOMATION
CLAMPING TECHNOLOGY CATALOG

Printed on: 05/2019

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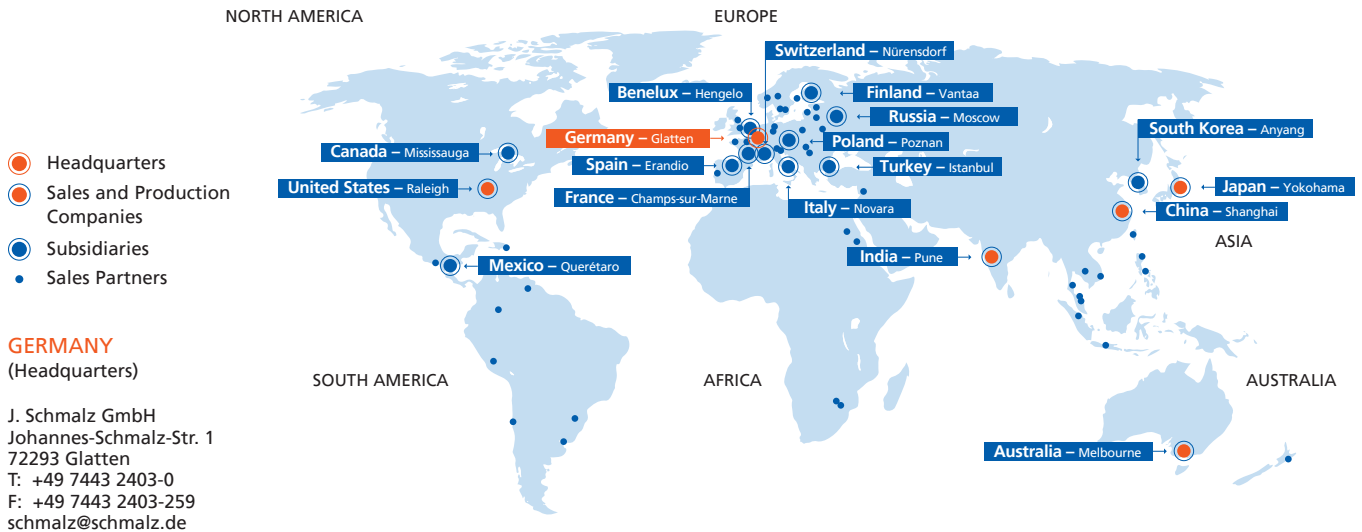
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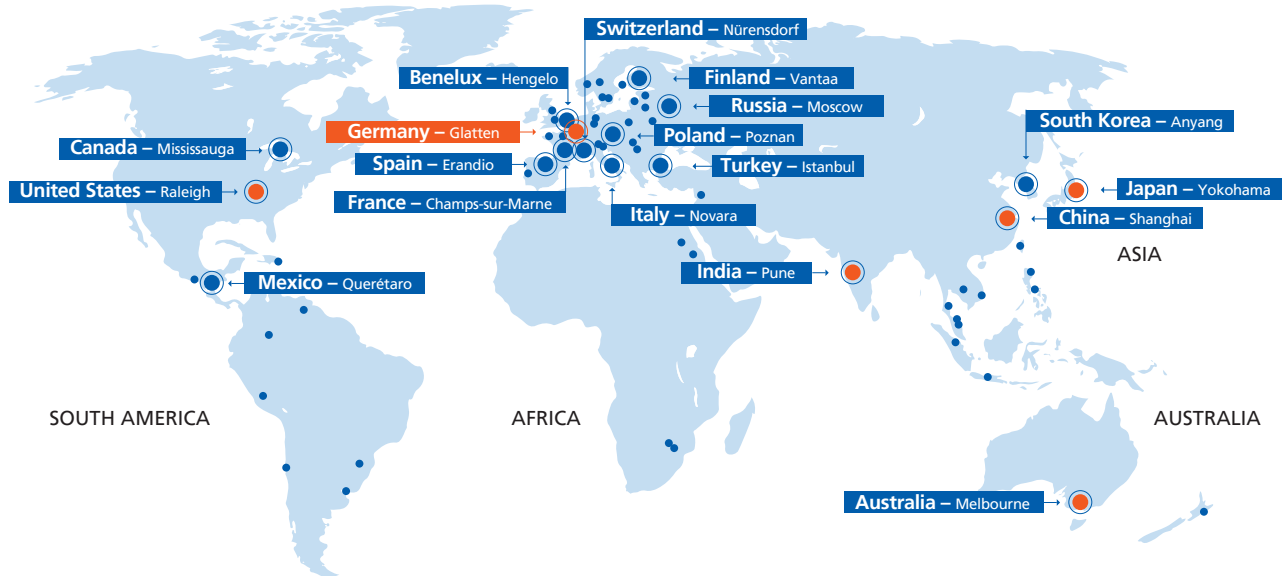
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